KV-M1100D
RM-818

SERVICE MANUAL

AEP Model
Chassis No. SCC-F04A-A

EE-1 CHASSIS

MODELS OF THE SAME SERIES	
KV-M1100D	KV-M1100E
KV-M1100A	
KV-M1100B	

SPECIFICATIONS

【KV-M1100D】

Television system	B/G/H/I/L
Color system	PAL, SECAM, NTSC3.58, NTSC4.43
Channel coverage	ITALIA VHF : A-H2 (C) UHF : 21-69 PAL B/G VHF : E2-E12 UHF : E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10
Frequency meduim	Mono-Standard F1 : Video 38.9MHz F1 : Audio 33.4MHz
Picture tube	Trinitron tube Approx. 28 cm (Approx. 26 cm picture measured diagonally) 90 °-degree deflection
Inputs	1 21-pin connector : CENELEC standard including RGB input. Y : 1Vp-p±3dB 75ohm C : 0.3Vp-p±3dB 75ohm
Outputs	21-pin connector : CENELEC standard Earphones jack : minijack
Sound output	2.5W (Music)
Power consumption	56 Wh
Dimensions	Approx. 296.2×261.0×328.5mm (w/h/d)
Weight	Approx. 8.5 kg
Supplied accessories	RM-818 Remote Commander (1) IEC designation R6 batteries (2) Terescopic antenna (1) DC cord (1) AC cord (1)

【RM-818】

Remote control system	infrared control
Power requirements	3V dc 2 batteries IEC designation R6 (size AA)
Dimentions	Approx. 44×25.3×108.4mm (w/h/d)
Weight	Approx. 105g (including batters)

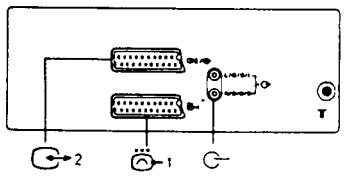
Design and specifications are subject to change without notice.

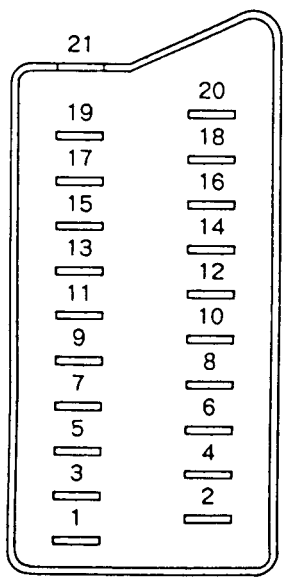
MICROFILM

TRINITRON® COLOR TV

SONY®

21 pin connector (1, 2)





Pin No.	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance: Less than 1kohm*
2	○	○	Audio input B (right)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
3	○	○	Audio output A (left)	Standard level: 0.5Vrms Output impedance: Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
7	○	●	Blue input	0.7V ± 3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5 – 12V): Part mode Low state (0 – 2V): TV mode Input impedance: More than 10kohms Input capacitance: Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal: 0.7V ± 3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (branking)	
15	○	–	Red input	0.7V ± 3dB, 75ohms, positive
	–	○	(S signal) croma input	0.3V ± 3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1 – 3V) Low state (0 – 0.4V) Input impedance: 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
20	○	–	Video input	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
	–	○	Video Input/Y (S signal)	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open) * at 20Hz – 20kHz

4 pin connector (S)

Pin No.	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB, 75ohms, positive Sync: 0.3V ± 3 dB
4	C (S signal) input	0.3V ± 3dB, 75ohms, positive

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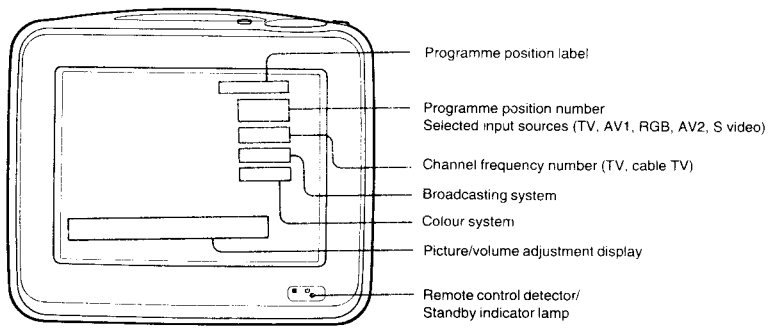
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

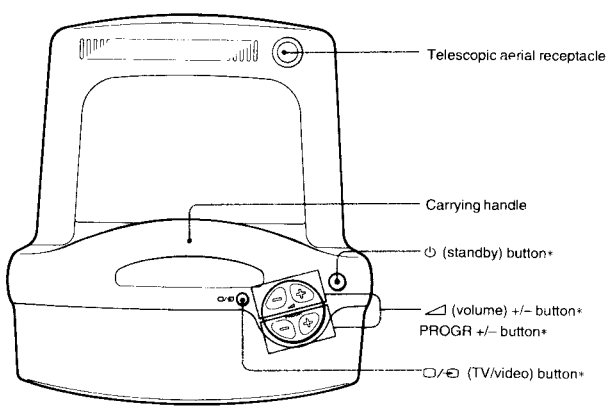
Identifying the Parts

Front controls and screen displays



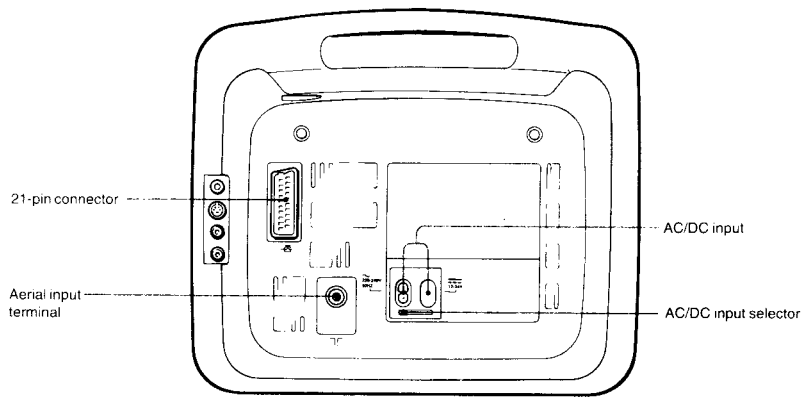
Note
When you first connect the TV to a power outlet, the TV will automatically go to standby mode, and the standby indicator lamp will light.

Top of the TV



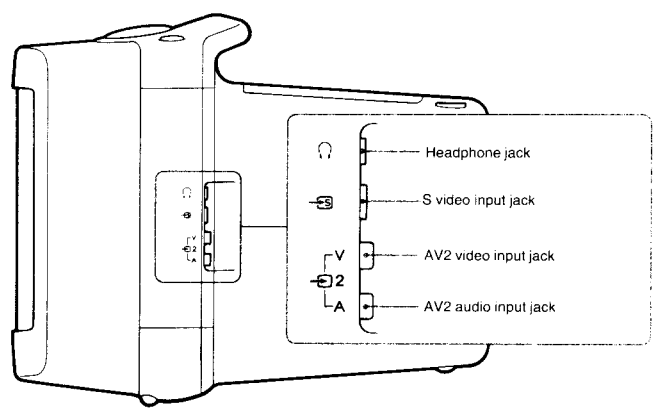
* The same function buttons are also located on the Remote Commander.

Rear of the TV



Side view

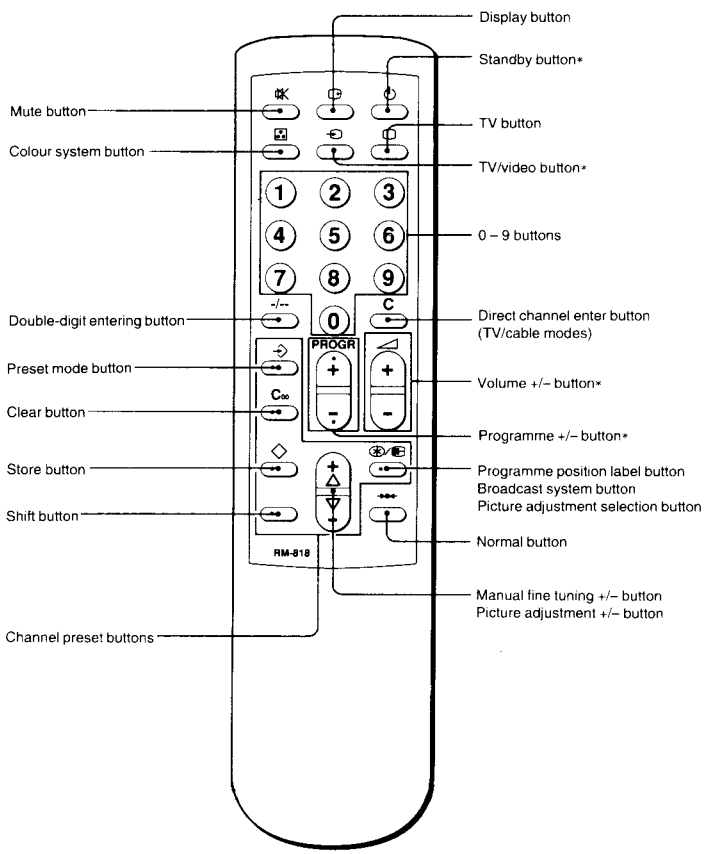
The symbol marks that appear at the side of the TV correspond to the jacks located on the recessed rear of the TV.



This section is extracted from instruction manual.

Remote Commander RM-818

Most of the functions of the TV require the Remote Commander. Take care not to lose it.

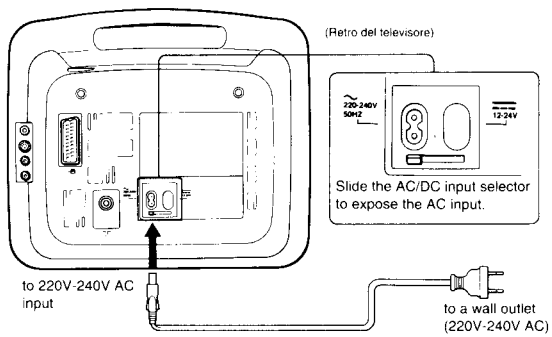


* The same function buttons are also located on the TV.

Setting Up Your TV

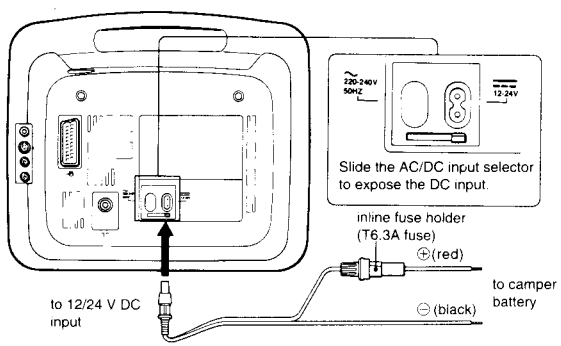
Using household (AC) current

To watch your TV using household current, attach the supplied AC power cord as shown below.


(Rear of TV)
(Retro del televisore)
220-240V 50HZ
12-24V
Slide the AC/DC input selector to expose the AC input.
to 220V-240V AC input
to a wall outlet (220V-240V AC)

Using a car battery

You can use the power from your camper van's battery by attaching the supplied DC power cord to the battery. (Attach the cord using clips designed for this purpose — not supplied).



Notes

- For car use, the TV is designed to be operated on negative ground 12V-24V DC only.
- Use the supplied DC power cord manufactured by Sony. The polarity of other manufacturers' cord plugs may be different.
- When you are not using the TV, disconnect the DC power cord. If you don't, battery power will be lost, even in standby mode.
- In hot temperatures, do not leave the TV in the car for a long time.
- If colour separation occurs when the TV is connected to a DC power source, switch to household (AC) current.

When battery power falls below 12V, the TV automatically switches off and goes to standby mode. (The standby lamp blinks for several seconds, then remains lit.) First recharge the battery, then press the PROGR +/– button on the TV or press ▢ on the Remote Commander to turn the TV on.

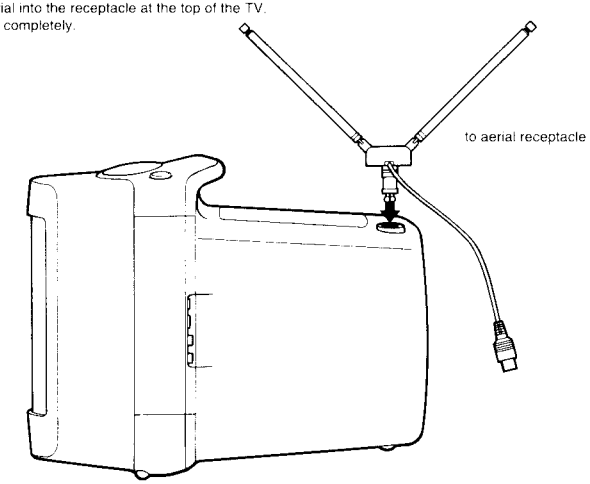
Caution

- **Do not connect the DC power cord to the AC power input, or the AC power cord to the DC power input.**
- **If you connect the DC power cord to the AC power oulet, or to the incorrect pole of the camper van's battery, the inline (T6.3A) fuse will burn out. Replace a burned-out fuse only with the same type fuse.**

Attaching the telescopic aerial (supplied)

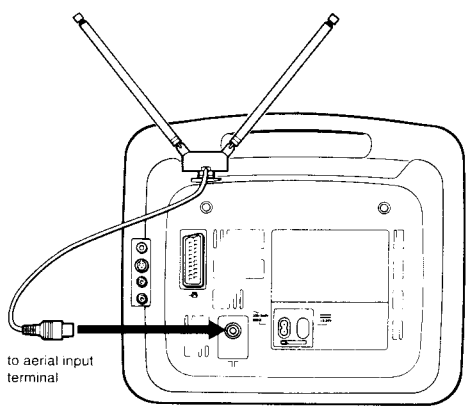
1 Insert the base of the aerial into the receptacle at the top of the TV, making sure it is inserted completely.

(Side of TV)



2 Attach the aerial connector plug to the aerial input terminal (rear of TV).

(Rear of TV)



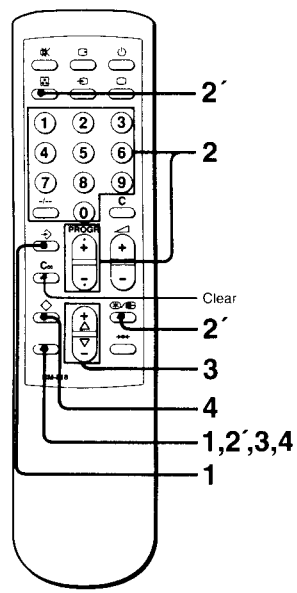
Note
To receive cable TV, contact your local cable company for cable connection.

GB

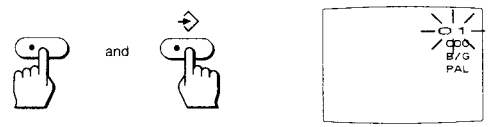
Presetting Channels

You can preset up to 60 channels onto programme position numbers (00 – 59), then select those position numbers to view the channels.
If you do not know the channel numbers of the stations you want to preset, follow the steps below ("Presetting channels automatically"). If you know the channel numbers, follow the steps on pp. 42, 43 ("Presetting channels directly").

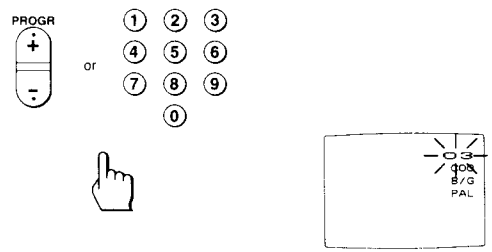
Presetting channels automatically



1 While pressing the shift button, press ⇨ to enter preset mode.



2 Press PROGR +/– on the Remote Commander, or press the 0 – 9 buttons to select the position number to which you want to preset a channel.



Note
To select a double-digit number with the 0 – 9 buttons, first press -/--.
For example, to select 23, press -/--, 2 and 3.

2´ While pressing the shift button, press ⦿/◙ to select the broadcasting (colour) system for your area. Each time you press, the systems change as shown below.

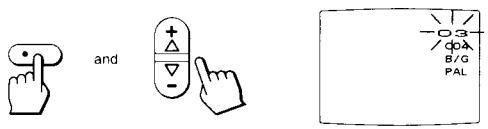
B/G (PAL) → L (SECAM) → I (PAL)

Press ◘ to switch between PAL and SECAM colour systems while in the B/G broadcasting system.

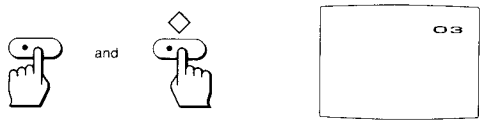
B/G (PAL) → B/G (SECAM)

3 While pressing the shift button, press manual fine tuning +/– to search for channels forward or backward automatically.

The TV will search for available channels, beginning with the lowest available frequency number (VHF/UHF/CATV [Hyper-band]), and stop when a channel is tuned in.



4 While pressing the shift button, press ◇ to preset the channel which is tuned in.



The channel is now preset and you will return to TV mode automatically.

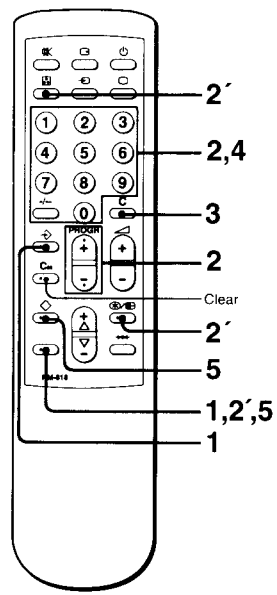
To preset other channels
Repeat steps 1 – 4.

To continue searching without presetting a tuned-in channel
Press manual fine tuning +/– again.

To clear a programme position
While pressing the shift button, press C∞. The programme position will be cleared, and the channel frequency number "00" will be selected.

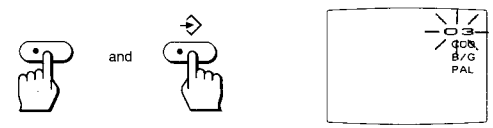
To exit preset mode
While pressing the shift button, press ◇.

Presetting channels directly

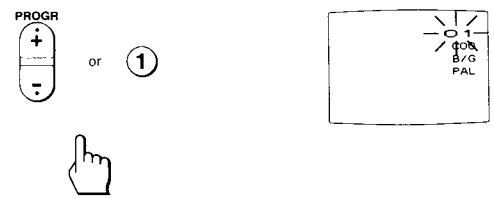


When you know the number of the channel you want to preset, follow the steps below to preset channels directly. For example, preset channel 3 onto position number 1.

1 While pressing the shift button, press ◇ to enter preset mode.



2 Press PROGR +/– on the Remote Commander, or press 1 to select position number 1.



Note
To select a double-digit number with the 0 – 9 buttons, first press -/--.
For example, to select 23, press -/--, 2 and 3.

2´ While pressing the shift button, press ⊕/◐ to select the broadcasting (colour) system for your area. Each time you press, the systems change as shown below.

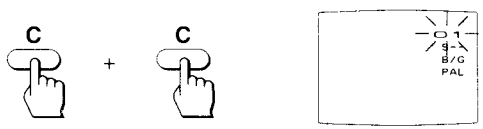
B/G (PAL) → L (SECAM) → I (PAL)

Press ⊡ to switch between PAL and SECAM colour systems while in the B/G broadcasting system.

B/G (PAL) → B/G (SECAM)

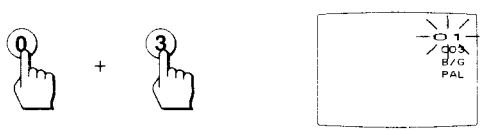
3 Press **C** to select the mode you want to preset. Press once to select regular TV mode; press twice to select cable TV mode.

TV mode

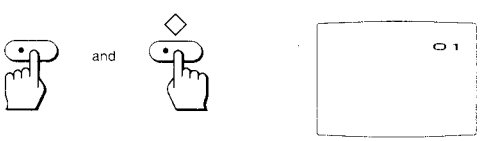


Cable TV mode

4 Press 0 and 3 to tune in channel 3 (you must press 0).



5 While pressing the shift button, press ◇ to preset the channel.



The channel is now preset and you have returned to TV mode

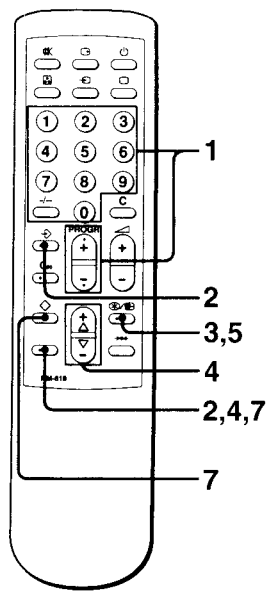
To preset other channels
Repeat steps 1 – 5.

To clear a programme position
While pressing the shift button, press **C**oe.

To exit preset mode
While pressing the shift button, press ⇢.

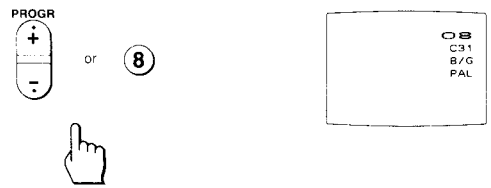
GB

Labeling programme positions

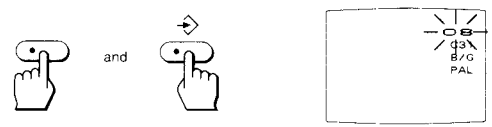


You can identify each programme position with a label of up to five characters to help you remember your preset channels. The label will appear every time the position number is displayed.
For example, label programme position 8 as "NEWS1."

1 Press PROGR +/– on the Remote Commander, or press 8 to select position number 8.

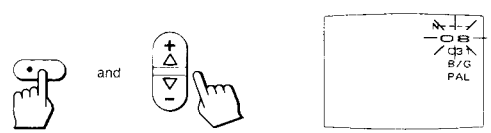


2 While pressing the shift button, press ⇢ to enter preset mode.



3 Press ✱/●.
The five label spaces will appear.

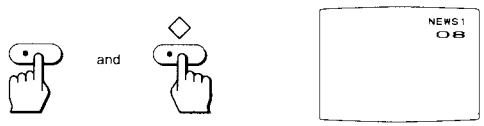
4 While pressing the shift button, press manual fine tuning +/– to select the letter "N".
(Numbers, letters of the alphabet and " — " (blank space) will appear sequentially each time you press manual fine tuning +.)



5 Press ⊛/▣ to set the first character "N."

6 Repeat steps 4 and 5 to set the E, W, S and 1.

7 While pressing the shift button, press ◇ to store the label.
You will return to TV mode automatically.



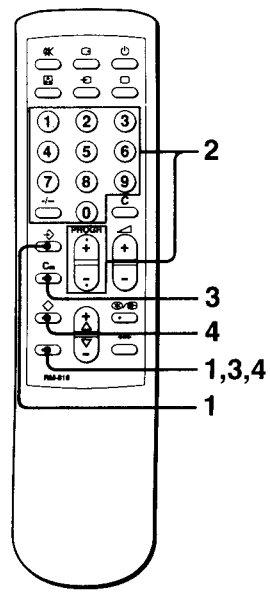
To exit label mode
While pressing the shift button, press ⇨.

To set other labels
Repeat steps 1 – 7.

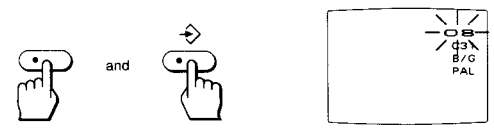
Skipping programme positions

By following the steps below, you can set the TV to skip unused programme position numbers when using PROGR +/–. You can select the skipped numbers by using the 0 – 9 buttons.

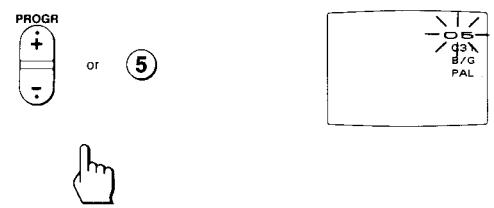
For example, set the TV to skip position number 5.



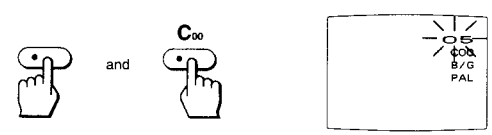
1 While pressing the shift button, press ⇨ to enter preset mode.



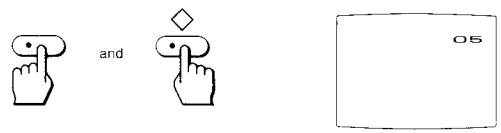
2 Press PROGR +/– on the Remote Commander, or press 5 to select position number 5.



3 While pressing the shift button, press C_{00}.
The channel frequency number "00" will be selected.



4 While pressing the shift button, press ◇ to set the position to be skipped.
You will return to TV mode automatically. The next time you press PROGR +/–, position 5 will be skipped



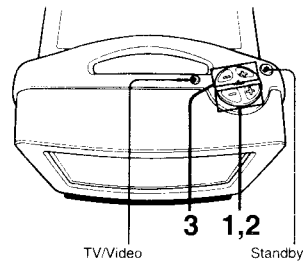
To skip other channels
Repeat steps 1 – 4.

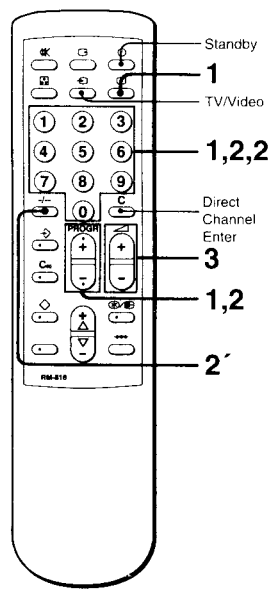
To cancel the skip setting
Preset a channel onto the position number, following the steps on pp. 40, 41 or 42, 43.

To exit skip mode
While pressing the shift button, press →.

Chapter 2: Operating Your TV

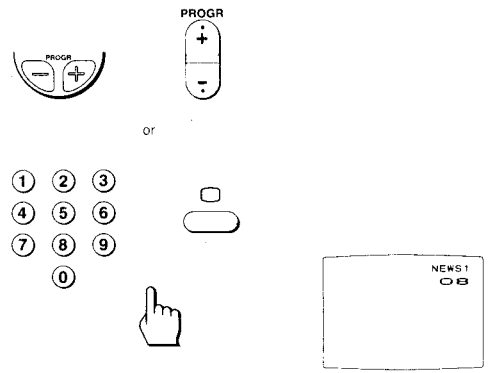
Watching TV Programmes



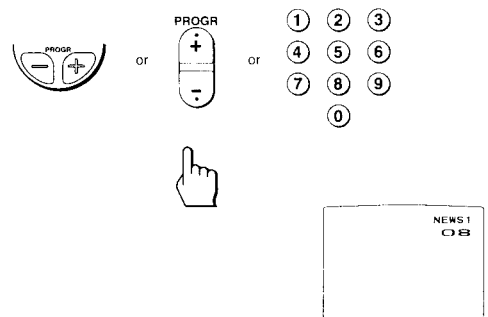


Preset channels first, following the instructions on pp. 40 – 47.

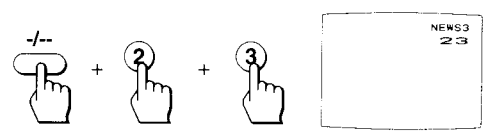
1 Press PROGR +/– on the TV or Remote Commander, or press the 0 – 9 buttons or TV button on the Remote Commander to turn the TV on.



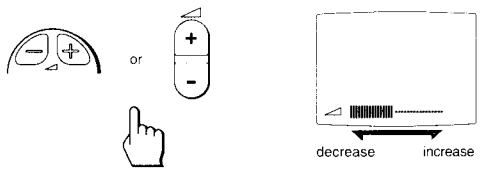
2 Press PROGR +/– on the TV or Remote Commander, or press the 0 – 9 buttons to select the programme you want to watch.



2´ Press -/-- first to select a double-digit number. For example, to select programme number 23, press -/--, 2 and 3.



3 Press ◿ +/– on the TV or Remote Commander to adjust the volume.



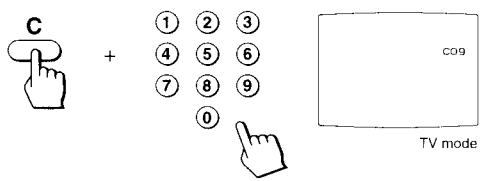
Press + to increase the volume.
Press – to decrease the volume.

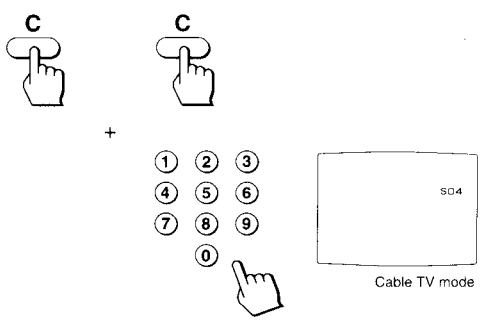
To tune in a channel temporarily

If you know the channel frequency number, you can tune in a channel temporarily, without presetting.

Press **C** to select the mode you want to watch. (Press once to select regular TV mode; press twice to select cable TV mode.) Then press the 0 – 9 buttons to select the channel.

The channel will be received, but it is not preset to any position number.





Note
To select a double-digit number, press **-/--** before pressing the 0 – 9 buttons.

To view the input from connected video equipment
Press ▢/⊖ or ⊖ to select the video input mode. ⊖**1** (AV 1), ⊖ (RGB), ⊖**2** (AV 2), ⊖ (S input) and TV modes will be selected in sequence. For further details, see pages 52 – 55.

To listen through a headphone
Connect a headphone (not supplied) to ∩ (the headphone jack) at the side of the TV (page 35).

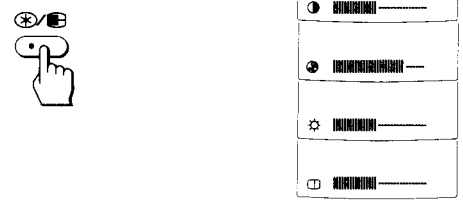
To turn off the TV
Press ⏻ on the TV or Remote Commander to turn the TV to standby mode.
To turn the power off completely, disconnect the power cord.

GB

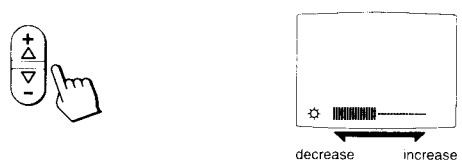
Adjusting the Picture

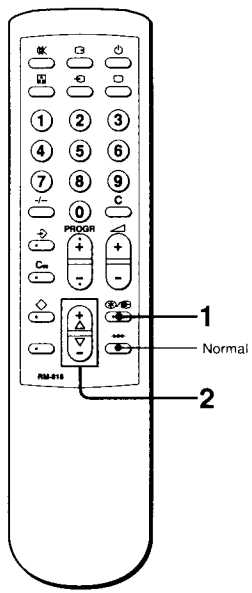
Use the picture adjustment feature to adjust the TV or video input picture to your taste.

1 Press ✱/◧ to enter picture adjustment mode. Press repeatedly to select the quality you want to adjust. (Picture, colour, bright, hue [NTSC colour system only] and sharpness are selected in sequence.)



2 Press picture adjustment +/– to make the adjustment.





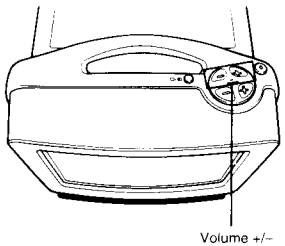
Picture quality	Press – button	Press + button
◑ (picture)	To decrease picture contrast with soft colour	To increase picture contrast with vivid colour
◕ (colour)	To decrease colour intensity	To increase colour intensity
☼ (bright)	To decrease brightness	To increase brightness
(hue) (NTSC only)	Skin tones become purplish	Skin tones become greenish
◫ (sharpness)	To decrease sharpness	To increase sharpness

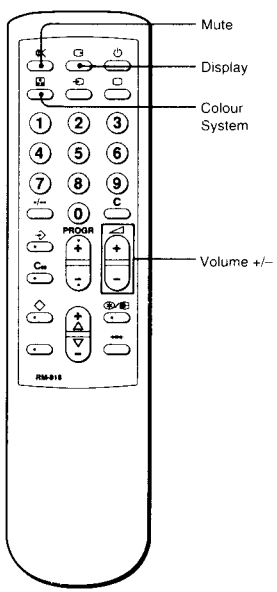
The display will disappear automatically after a few seconds, if you do not press any buttons.

To restore the original settings

Press ⇤.
All the qualities will be restored to their original factory-set levels.

Using Other Convenient Features





Muting the sound

Press 🔇 to mute the sound.
The display 🔇 will appear on the screen.

To restore the sound
Press 🔇 again, or press ◁ +/– on the TV or Remote Commander.

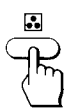
Keeping the input mode displayed

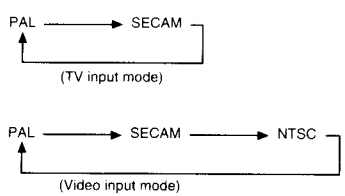
Press ⊡ to display the current input modes.

To cancel the display
Press ⊡ again.

Changing colour systems

You can improve the colour reception by selecting the colour system suitable for your area. Each time you press ⊞, the colour system will change as shown below.

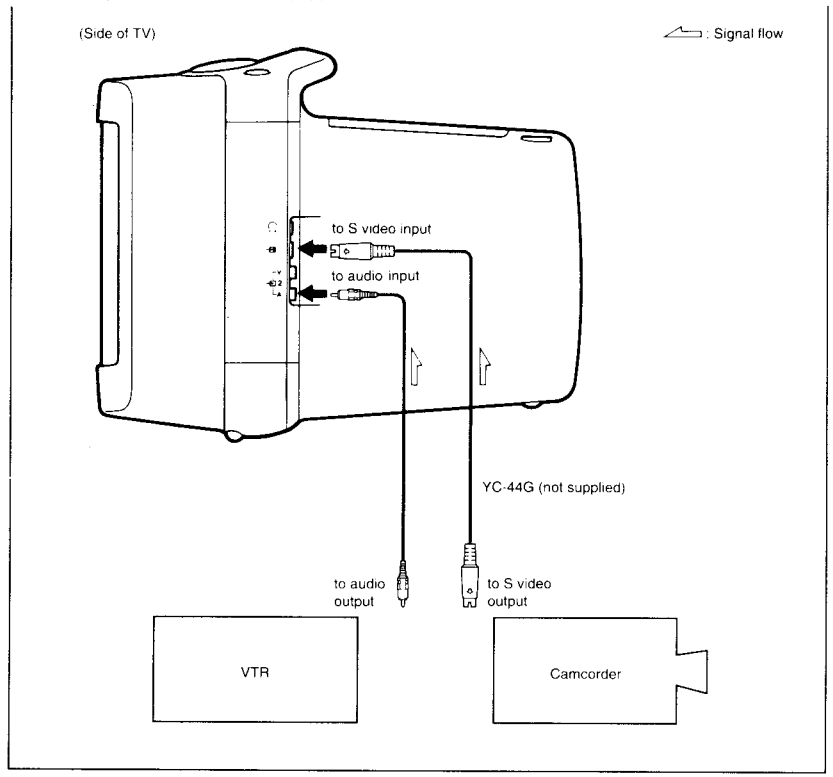




GB

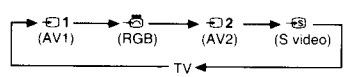
Connecting Optional Equipment

Connecting a VTR or Camcorder equipped with an S video output jack



Operating your equipment

1 Select S video input mode by pressing ⊡/⊡ on the TV or ⊡ on the Remote Commander until ⊡S appears on the screen. Each time you press, the screen display will change as follows:



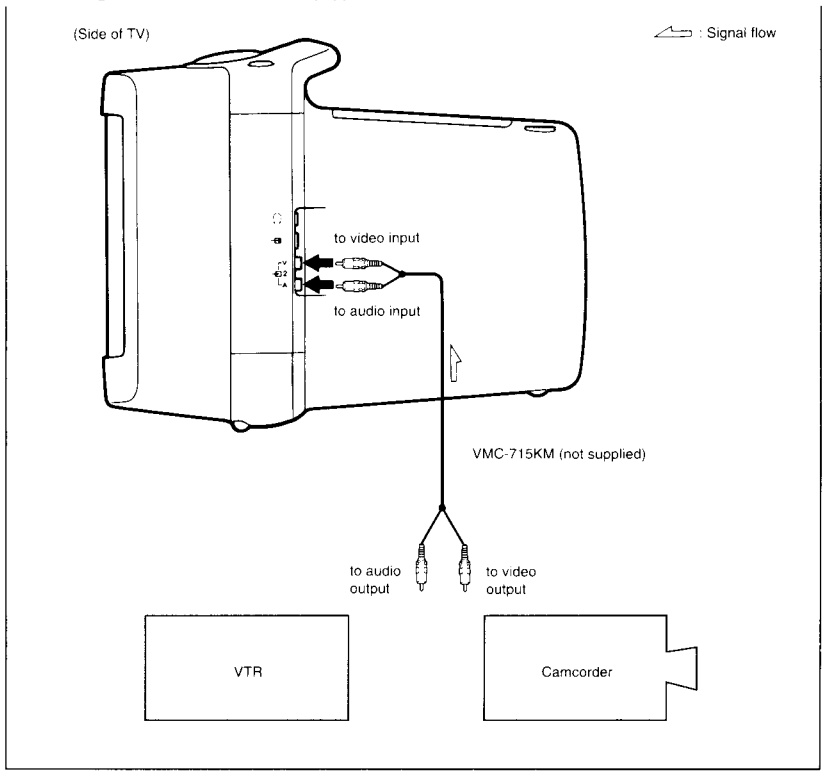
2 Set the equipment to playback mode.

To return to TV mode
Press ⊡ on the Remote Commander to return directly to TV mode.

Notes

- Before connecting, be sure to turn off all equipment.
- Be sure to fully insert the plugs into the jacks. A loose connection may cause hum and noise.
- You can watch the image from a VTR by connecting through the ⊓ terminal at the rear of the TV. In this case, press ⊡ to select TV mode, and then select Channel 0.

Connecting a VTR or Camcorder not equipped with an S video output jack



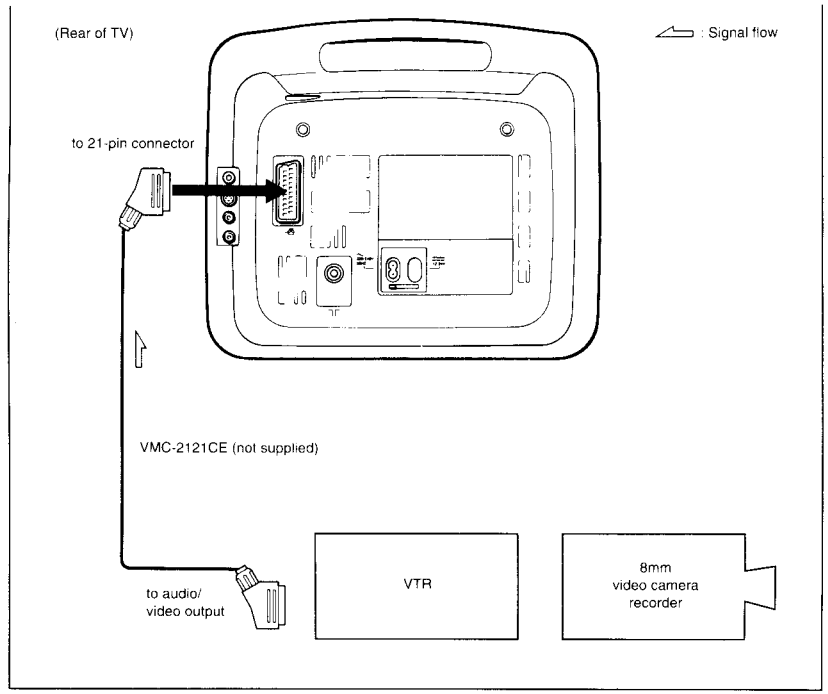
Operating your equipment

1 Select AV 2 mode by pressing ▢/⊖ on the TV or ⊖ on the Remote Commander until ⊖2 appears on the screen.

2 Set the equipment to playback mode.

To return to TV mode
Press ▢ on the Remote Commander to return directly to TV mode.

Connecting video equipment using the 21-pin connector



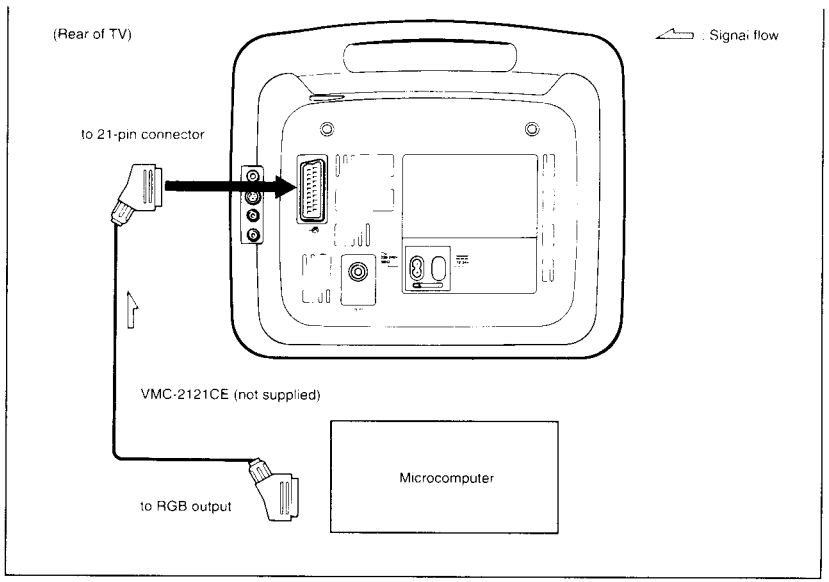
Operating your equipment

1 Select AV 1 mode by turning on the equipment.

2 Set the equipment to playback mode.

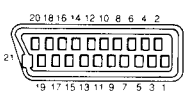
To return to TV mode
Press ▢ on the Remote Commander to return directly to TV mode, or turn the video equipment off.

Connecting a microcomputer



To view the input from the microcomputer
Select RGB input mode by pressing □/⊖ on the TV or ⊖ on the Remote Commander until appears on the screen.

21 pin Euro Connector Configuration



Notes

- When RGB-type equipment (like a microcomputer) is connected, you can adjust ◑ (picture) and ☼ (bright), but not (hue), ◕ (colour) or ◫ (sharpness) (see page 50).
- If you connect a microcomputer or anything else to the 21-pin outlet, be sure to turn the connected equipment off when watching images coming in through the ⊖ (S video) input jack. Otherwise, there may be interference to the picture being displayed.

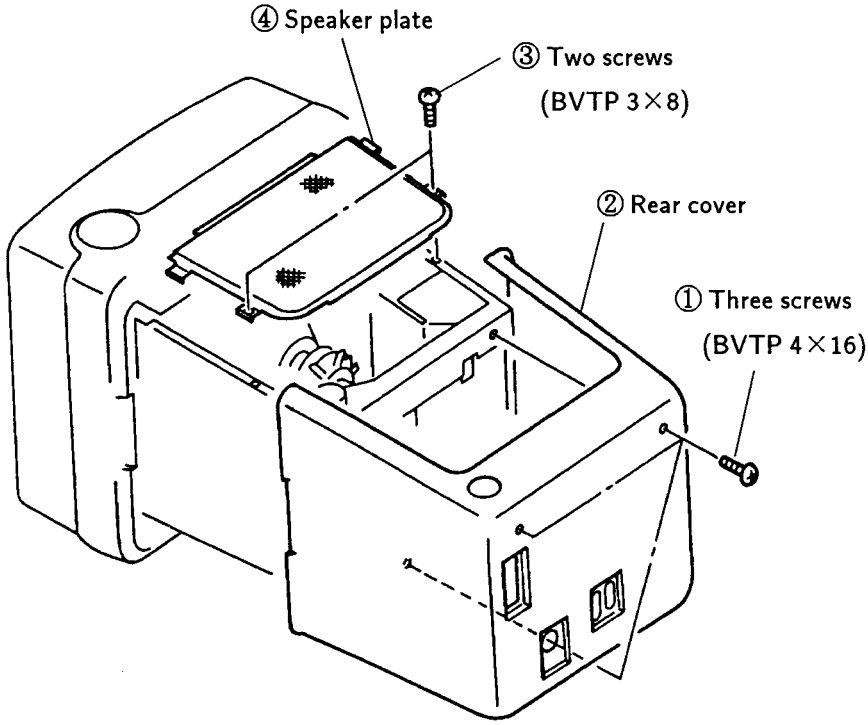
Troubleshooting

Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed here. If the problem still cannot be solved, contact your nearest service facility.

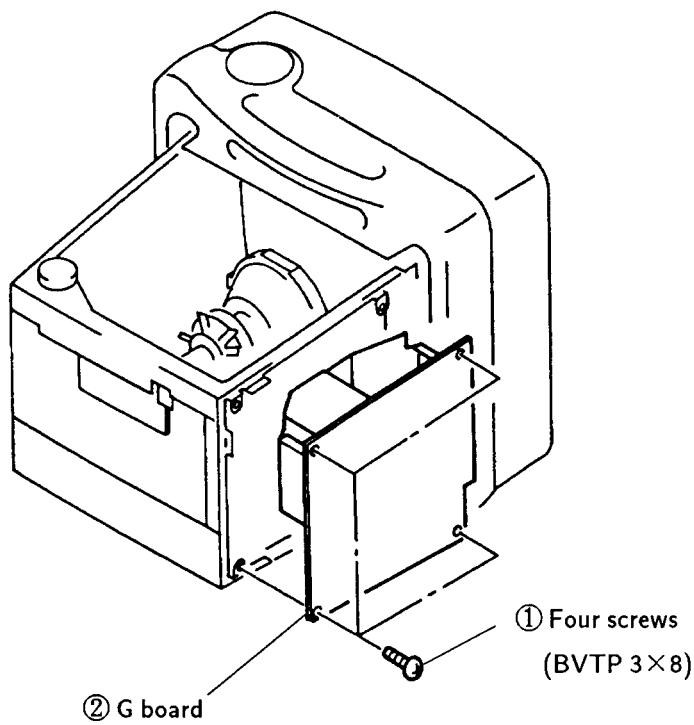
Symptom	Possible causes and remedies
No picture (screen not lit), no sound	• Plug the TV in, and check the power connection. • Press PROGR +/– on the TV or press PROGR +/– or the 0 – 9 buttons on the Remote Commander. • Check the aerial connection. • Check the TV/video input setting. • Turn the TV off for 3 or 4 seconds and then turn it on again.
Poor or no picture (screen not lit), good sound	• Adjust the picture with the picture adjustment button (page 50). • Adjust the telescopic aerial.
Good picture, no sound	• Press + on the TV or Remote Commander. • Disconnect the headphone. • If is displayed on the screen, press or +/–.
No colour for colour programmes	• Adjust the colour with the picture adjustment button. • Adjust the telescopic aerial. • Press on the Remote Commander to change colour systems.
Snow and noise only	• Check that it is an active or correct channel. • Check the cable setting. • Check aerial/cable connections.
Dotted lines or stripes	This is often caused by local interference (for example, cars, neon signs and hairdryers). Adjust the telescopic aerial for minimum interference.
Double images or ghosts	Reflections from nearby mountains or buildings often cause this problem. Connecting CATV cable may improve the picture.
Try another channel. It could be station trouble.	

SECTION 2
DISASSEMBLY

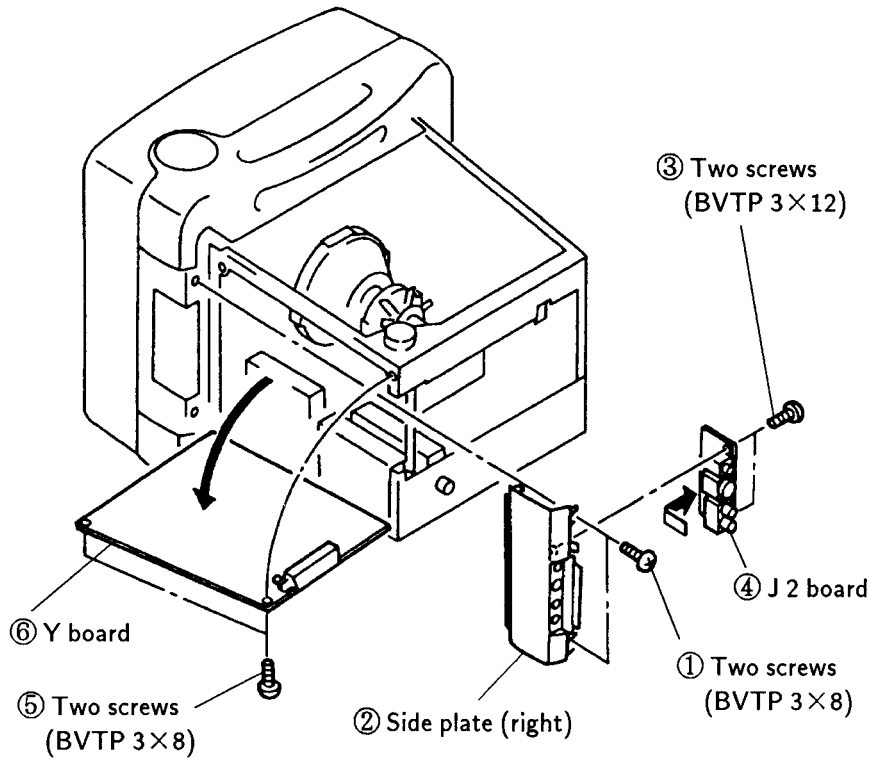
2-1. REAR COVER REMOVAL



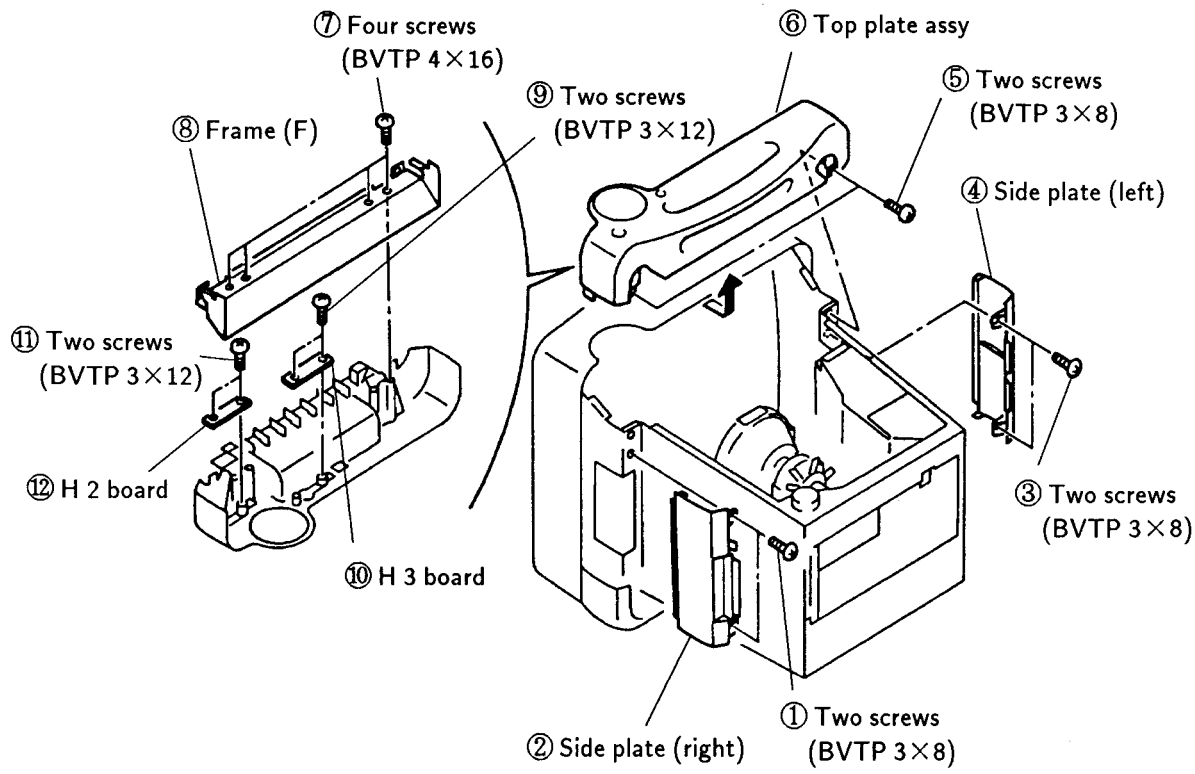
2-2. G BOARD REMOVAL



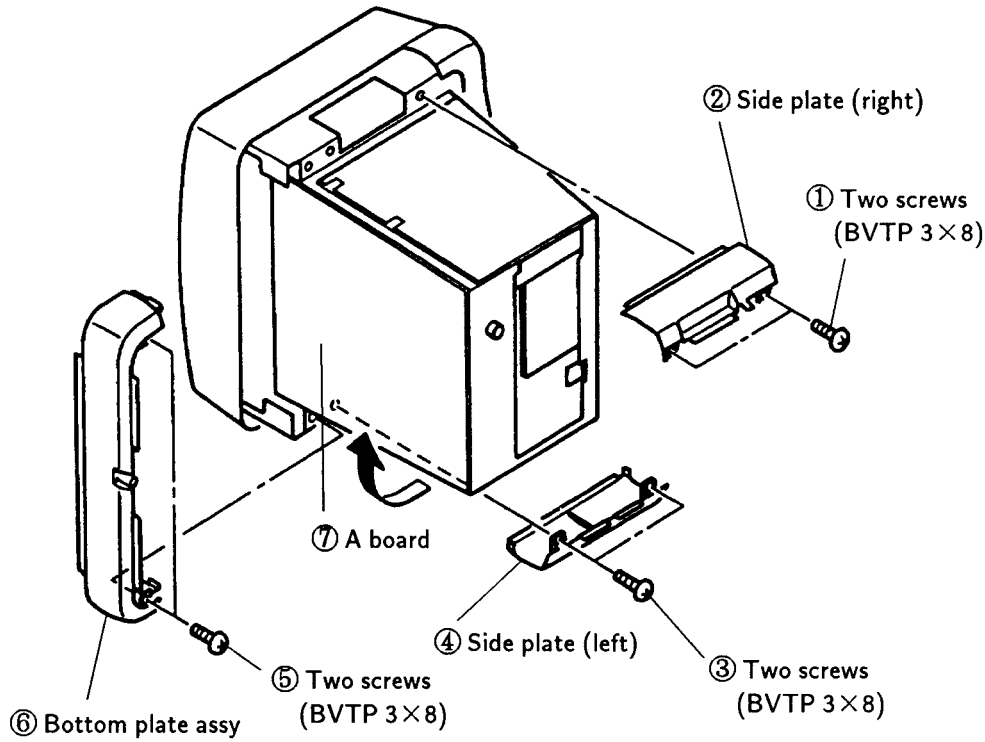
2-3. J 2 AND Y BOARD REMOVAL



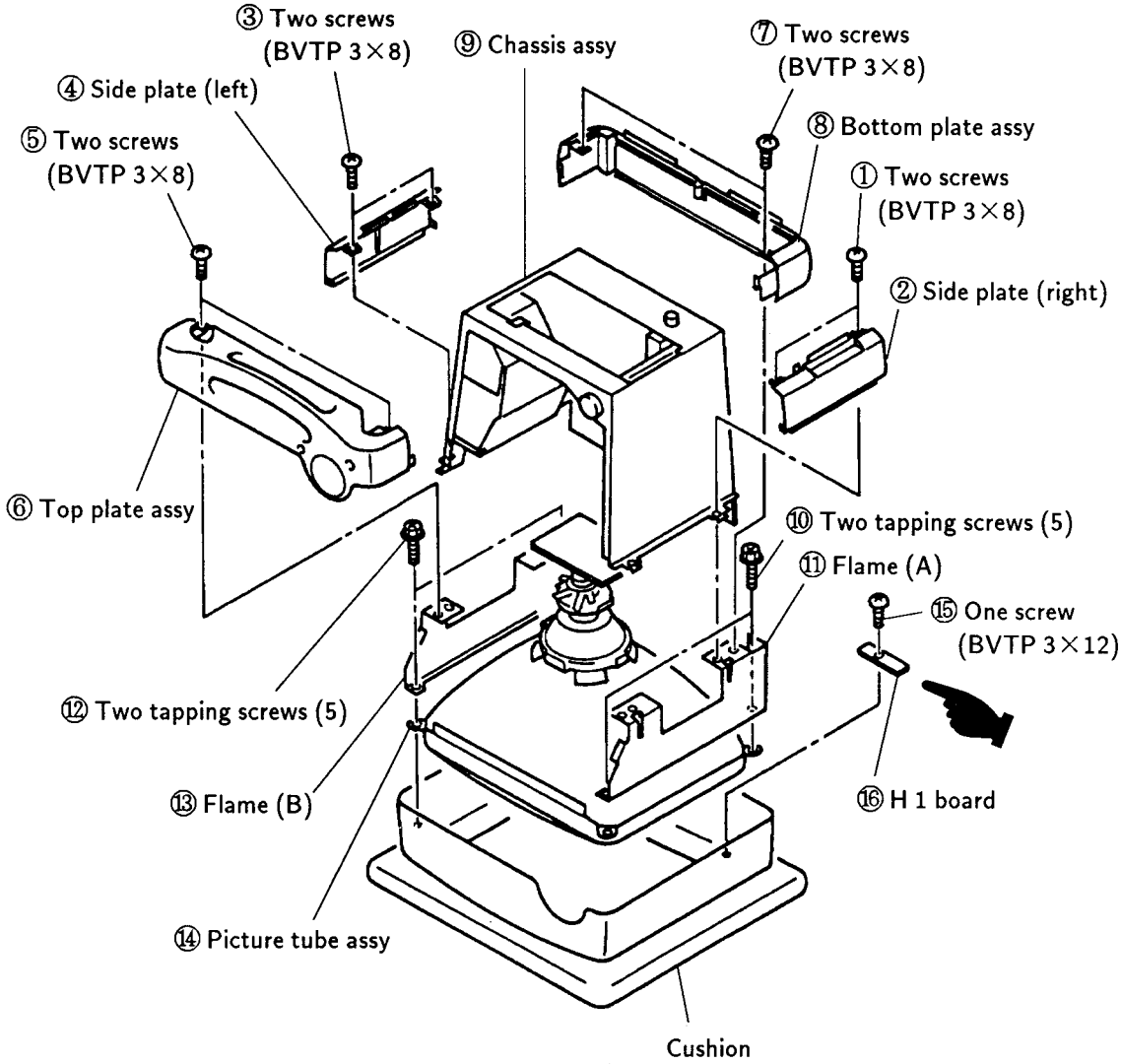
2-4. H 2 AND H 3 BOARD REMOVAL



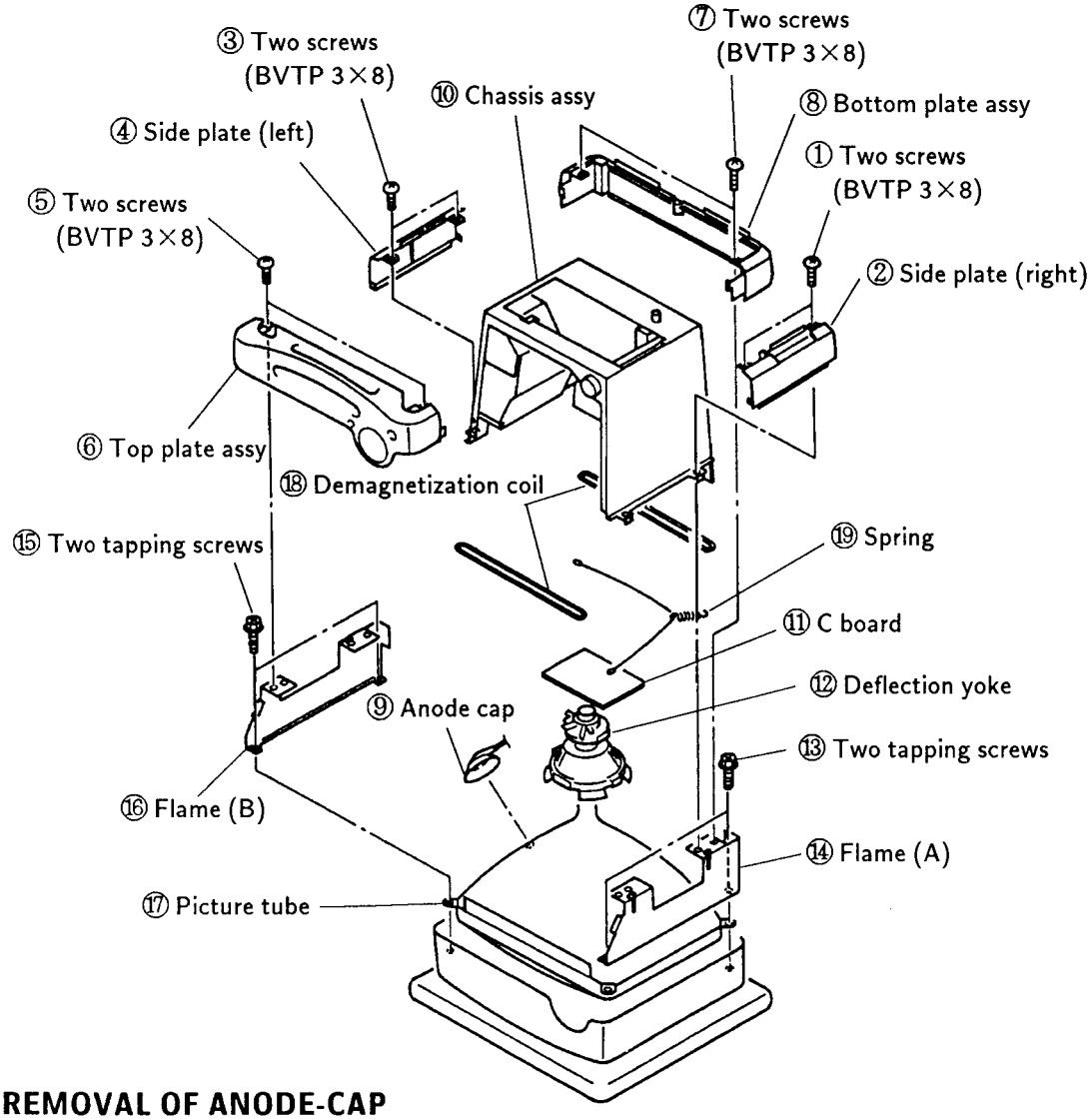
2-5. SERVICE POSITION



2-6. H 1 BOARD REMOVAL


③ Two screws (BVTP 3×8)
⑨ Chassis assy
⑦ Two screws (BVTP 3×8)
④ Side plate (left)
⑤ Two screws (BVTP 3×8)
⑧ Bottom plate assy
① Two screws (BVTP 3×8)
② Side plate (right)
⑥ Top plate assy
⑩ Two tapping screws (5)
⑪ Flame (A)
⑮ One screw (BVTP 3×12)
⑫ Two tapping screws (5)
⑬ Flame (B)
⑯ H 1 board
⑭ Picture tube assy
Cushion

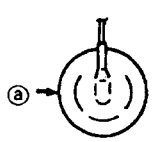
2-7. PICTURE TUBE REMOVAL



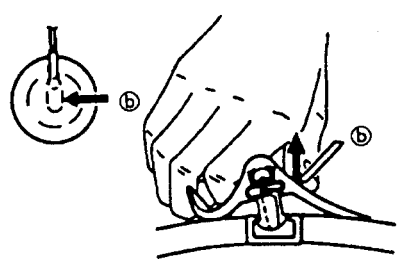
• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

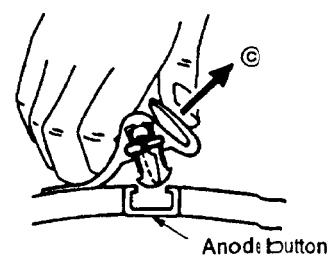
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



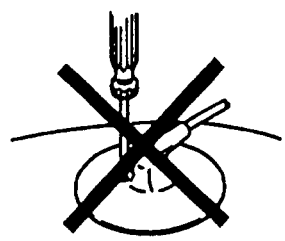
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

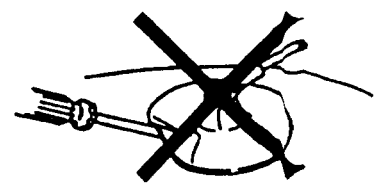
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

● The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

● These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switch below should be set as follows unless otherwise noted :

◑ CONTRASTcontrol ..... 80%(or Normal by commander)

☼ BRIGHTNESS control 50%

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G 2) and White Balance

Note: Test Equipment Required.

1. Color bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

Preparation:

● Set the side of the unit with the PICTUE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.

● Turn the power switch for the unit ON and erase the magnetic force using a degausser..

3-1. BEAM LANDING

Demagnetize with a degausser

1. Input a raster signal with the pattern generator.
   CONTRAST
   BRIGHTNESS } normal
2. Turn the raster signal of the pattern generator to red.
3. Move the deflection yoke backward, and adjust with the purity control so that red is in the center and blue and green are at the sides evenly. (Fig.3-1 to 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes red. (Fig.3-1)
5. Switch over the raster signal to blue and green confirm the condition.
6. When the position of the deflection yoke is determined,tighten it with a deflection yoke mounting screw.
7. When landing at the corner is not right, adjust by using the disk magnets. (Fig.3-4)

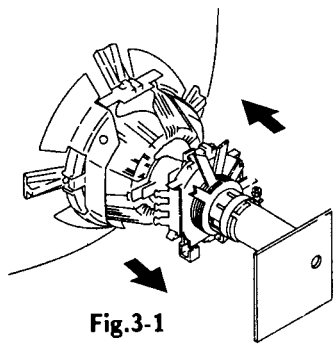


Fig.3-1

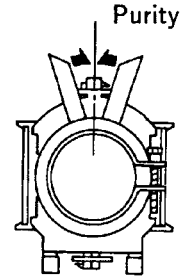


Fig.3-2

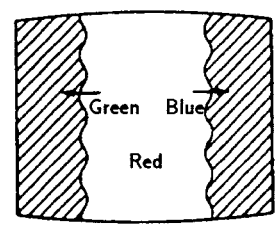


Fig.3-3

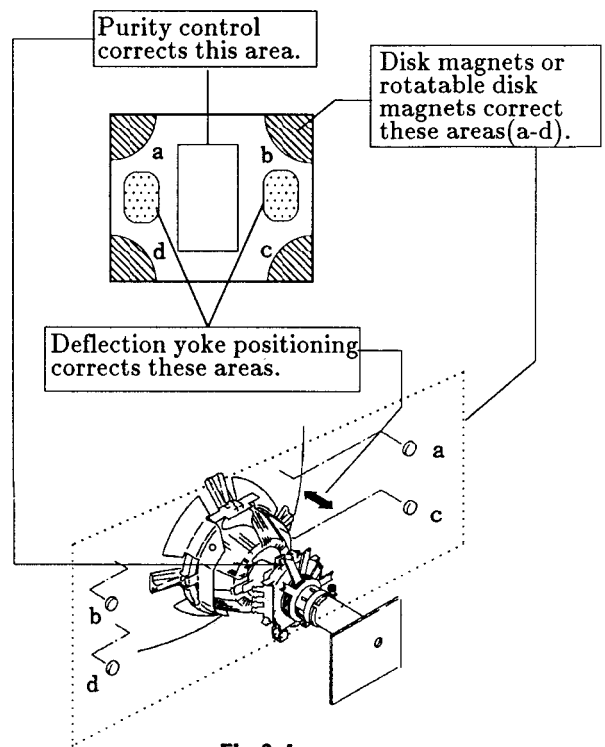


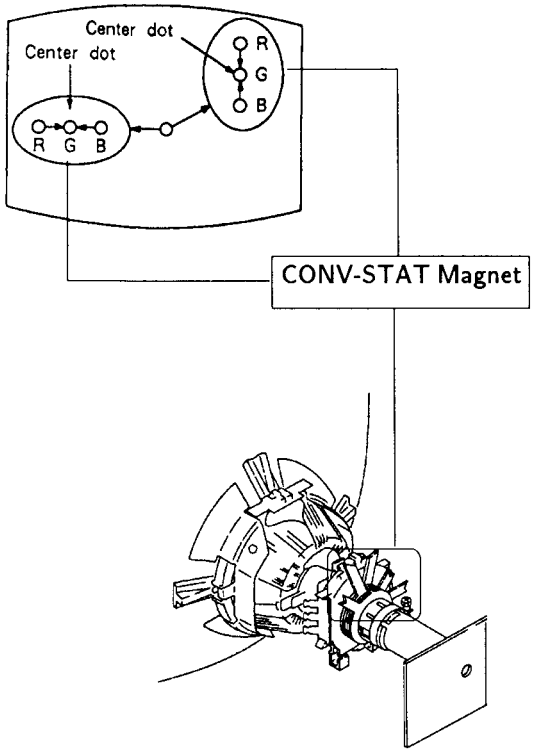
Fig.3-4

3-2. CONVERGENCE

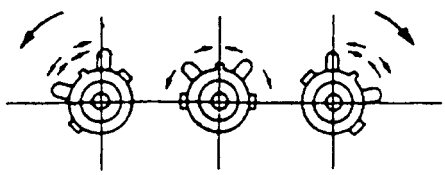
Preparation:

- Before starting, perform FOCUS, H.SIZE, and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in the dot pattern.

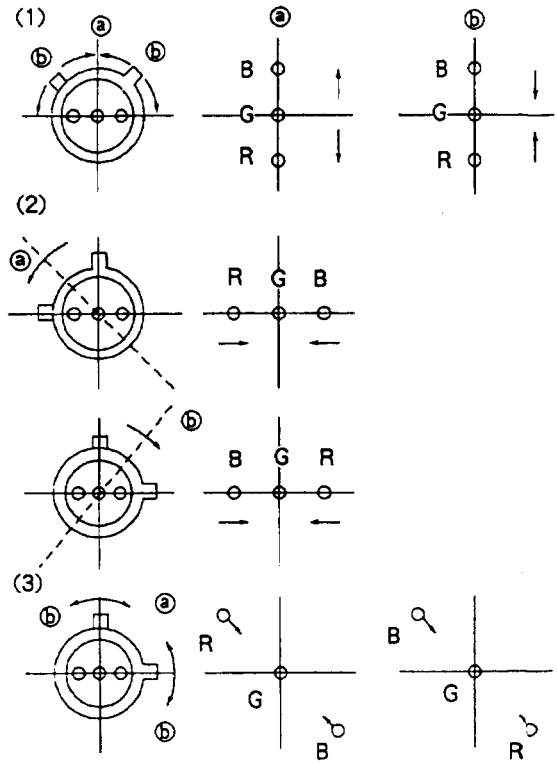
(1) Horizontal and Vertical Static Convergence



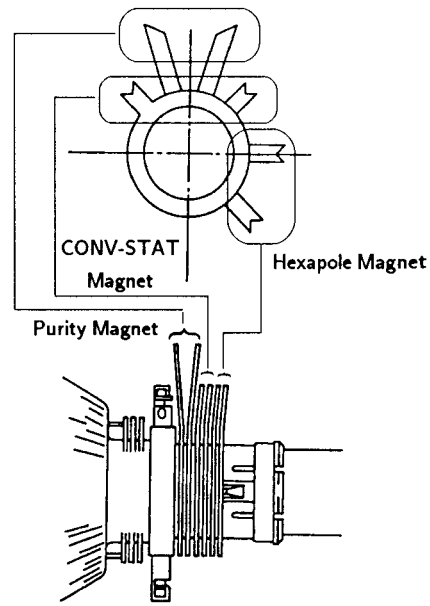
1. Adjust CONV-STAT Magnet to coincide red, green blue dots on the center of screen.
   - Tilt the CONV-STAT magnet and adjust static convergence to open or close the CONV-STAT magnet.



2. When the CONV-STAT magnet is moved in the direction of arrow ⓐ and ⓑ, Red, Green and Blue dots move as shown below.

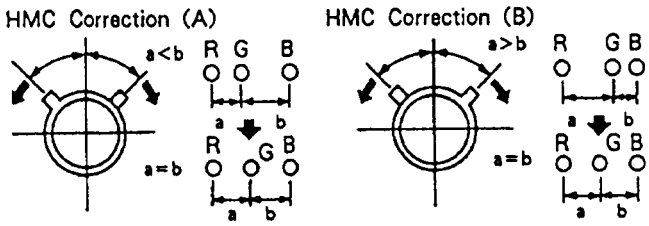


✻ IF the red and green dots do not coincide with blue dot, adjustment with BMC (6-poles) magnet.

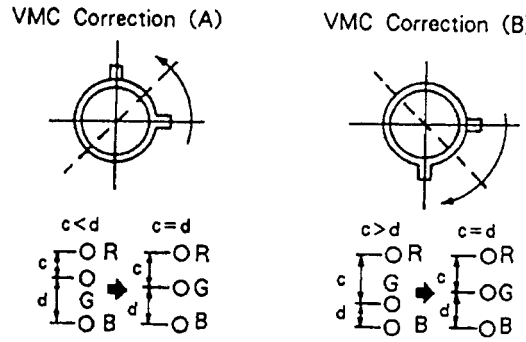


● HMC and VMC correction for BMC (6-polse) magnet.

1. HMC (Horizontal Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.



2. VMC (Vertical Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.

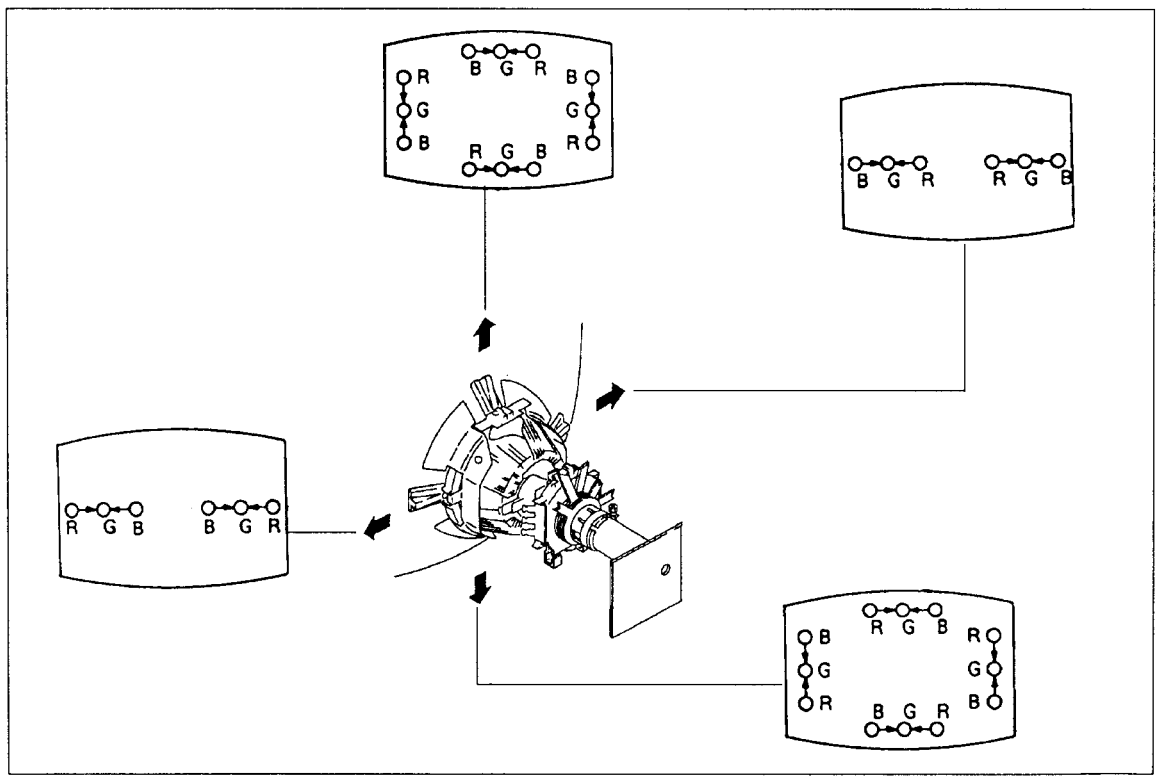


(2)Dynamic Convergence Adjustment

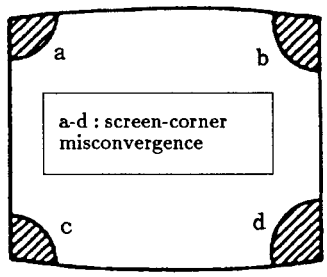
Preparation:

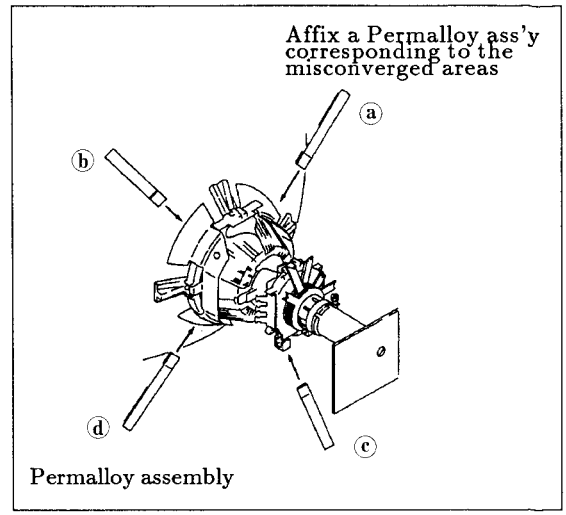
● Before starting perform Horizontal and Vertical static convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



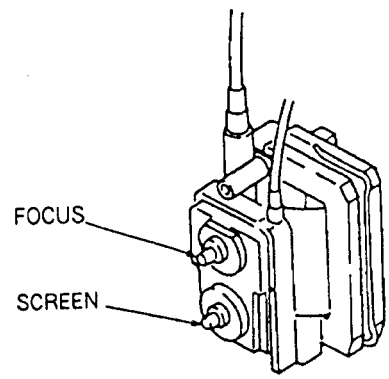
(3) Screen-corner Convergence





3-3. FOCUS

1. Input a monoscope signal.
   CONTRAST
   BRIGHTNESS } normal
2. Adjust FOCUS control for a best picture at the center and both sides of the screen.



3-4. SCREEN (G 2) and WHITE BALANCE AUTOMATIC ADJUSTMENT

(Adjustment with remote commander in service mode)

(1) G 2 adjustment screen

1. Set picture and brightness to STANDARD.
2. Apply external voltage 150 VDC to each of the red, green, and blue cathodes.
3. Adjust the G 2 control knob to a position immediately before the retrace line on the screen disappears.

(2) White balance adjustment (See the table of service items)

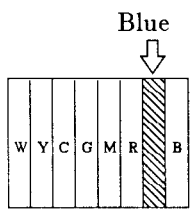
Call item NOs. 13-18 in service mode and adjust each.

1. Receive the color bar place the set into service mode.
2. Set picture to MINIMUM and brightness to STANDARD.
3. Set cut-off (red, green and blue) to MINIMUM and drive (green and blue) to CENTER.

Cut-off DRIVE

No	Item name	Data	No	Item name	Data
16	G BKG	64	13	R BKG	100
17	B BKG		14	G BKG	
18	R BKG		15	B BKG	

4. Adjust brightness compensation so that the blue stripe section of the color pattern shines dimly.



5. Switch the pattern generator signal to ALL WHITE.
6. Adjust white balance with each cut-off.
7. Set picture to MAXIMUM and adjust white balance with the green and blue drive.
8. Repeat the above until white balance between MINIMUM and MAXIMUM of picture is obtained.
9. Switch the pattern generator signal to the color pattern signal.
10. Adjust brightness compensation so that the blue stripe section on the screen shines dimly when picture is set to MINIMUM.

3-5. ADJUSTMENT PROCEDURE

(Reading memory contents)

(1) Confirm that the set has started up in the user mode. (CB) . Press the picture quality adjustment key ⋯ to leave the set in normal state. Turn off the power the set.

(2) Turn on the power to the set white holing down the service switch located on the rear panel of set. Confirm that SERVICE is indicated on the screen.

(3) press the ⁄ key. Confirm that indication R on the upper right corner of the screen blinks.

(4) Press the C key while indication R is blinking. Thus, the contents of NVM are read in.

Note : If IC 306 is a new one (e.g., entirely new one immediately after replacement), do not execute steps (3) and (4) above.

3-6. ADJUSTMENT PROCEDURE

(Writing the contents of adjustment into memory)

When adjustments are completed.

(1) Press the ⌧ key Confirm that indication W on the upper right corner of the screen blinks.

(2) Press the C key while indication W is blinking. W stops blinking and the STBY LED lights. Writing to memory is completed when W and LED go out.

NO	Item name	Data
13	R DRIVE	0~127
14	G DRIVE	0~127
15	B DRIVE	0~127
16	G BKG	0~255
17	B BKG	0~255
18	R BKS	0~255

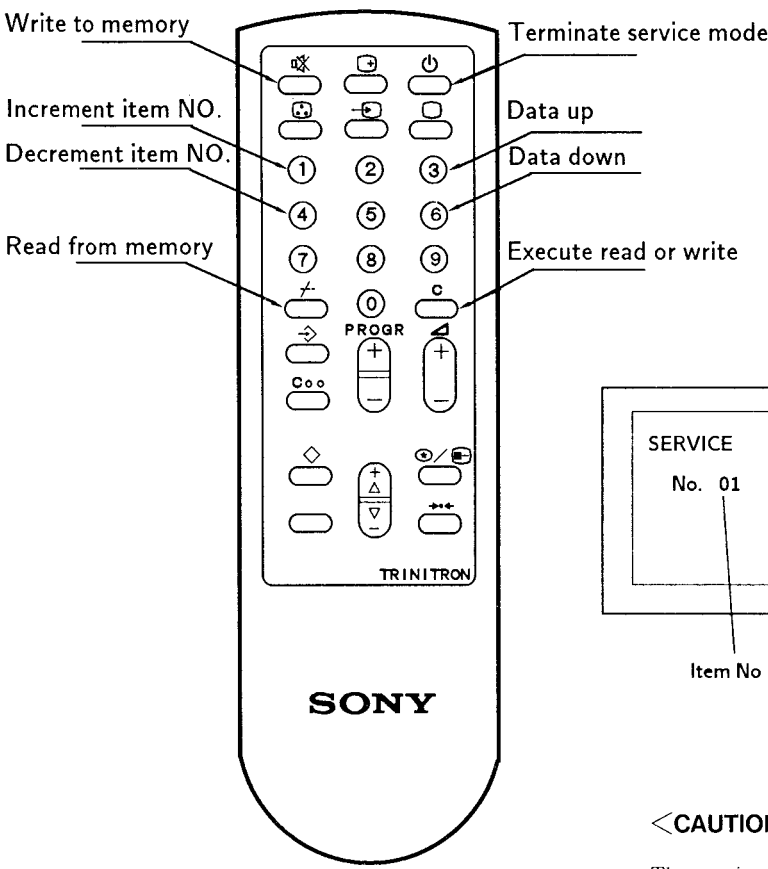
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. COMMANDER OPERATION IN SERVICE MODE

[Electrical adjustment in service mode]

Electrical adjustments for service with this type of model can be accomplished by using the remote commander RM-818 included with the set.

Figure : Key assignments in service mode



(1) Unusable keys

① 2, 5, 7, 8, 9, 0 among numeric keys

② C00 ◇, ⊙, ⊞ (+/−) These keys are asserted when the key is pressed while holding down the ⊂⊃ key.

(2) Usable keys (incl. those which do not change the meaning)

① ⊡

② ⊡, ▢

③ ⊡

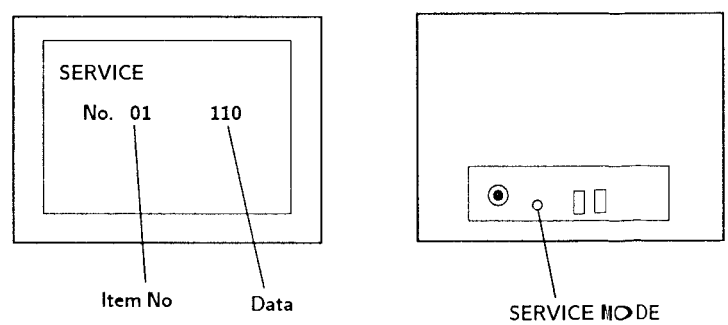
④ PROGR (+/−)

⑤ ⊡, ⊡ (+/−)

⑥ ⊡

⑦ ◿ (+/−)

Screen in service mode



<CAUTION>

The service mode is used to prohibit the following.

(1) Data writing in the non-signal condition.

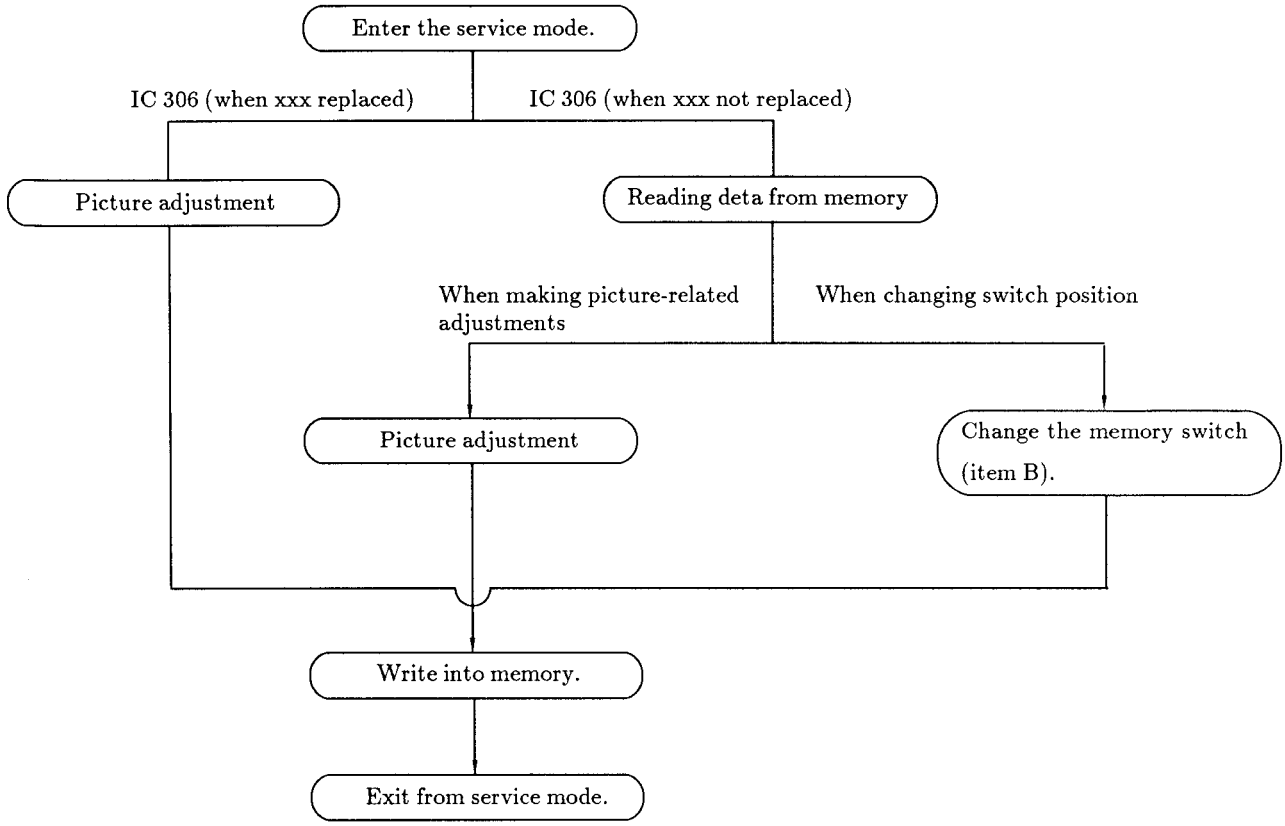
(2) Releasing the service mode when the power supply has been turned off with the commander.
(Be sure to turn off the main power supply of the unit before releasing.)

(3) Power off during writing (while the LED is lit)

(4) Switching of the color system during service item No.1 (VCO)

(5) Data writing during the NTSC 443 mode.

How to adjust in service mode


Enter the service mode.
IC 306 (when xxx replaced)
IC 306 (when xxx not replaced)
Picture adjustment
Reading deta from memory
When making picture-related adjustments
When changing switch position
Picture adjustment
Change the memory switch (item B).
Write into memory.
Exit from service mode.

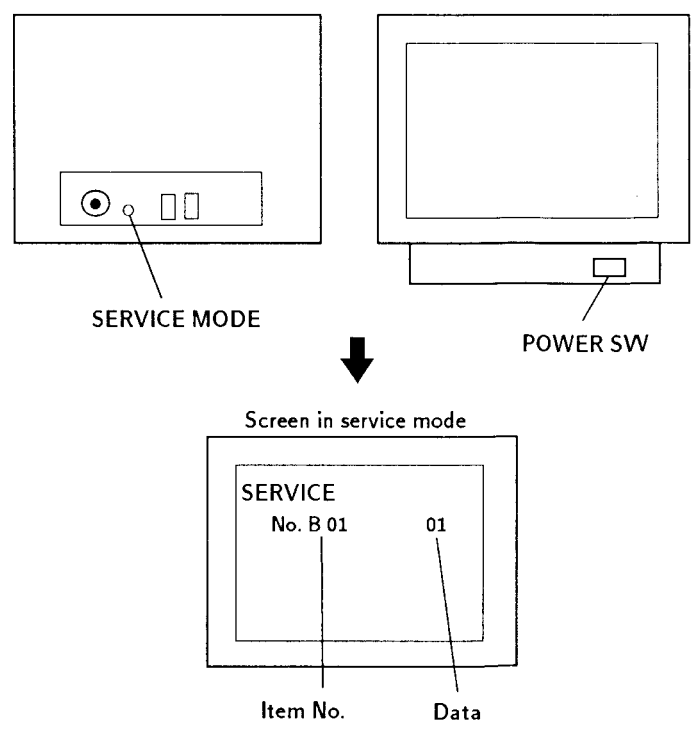
※ Note : Do not turn off the power before writing adjustment data into memory. If the power is off, your adjustment data cannot be stored in memory. Always be sure to write data into memory after making adjustments.

[Basic adjustment in service mode]

1. Entering the service mode

① Insert a narrow screw-driver into the hole located on the rear cover of the TV set. When this is done, the switch located at the back of the hole is pressed.

② While pressing the switch, plug the power cord of the TV into the AC outlet. (Or you may turn on the power of the TV from standby state by using the remote commander.) A message "SERVICE NO. 01 00" will be displayed in green on the screen as the unit enters the service mode.

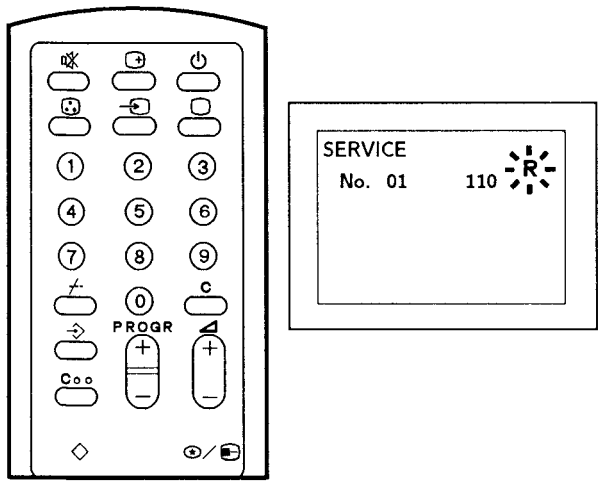


2. Reading data from memory

① Read the adjustment values of all items and switch-setting values from memory.

To do this, press the [-/--] button, then the [C] button on the remote commander. When [-/--] is pressed, the letter R blinks on the upper right corner of the screen. When [C] is pressed during this time, the letter R stops blinking and data read is terminated.

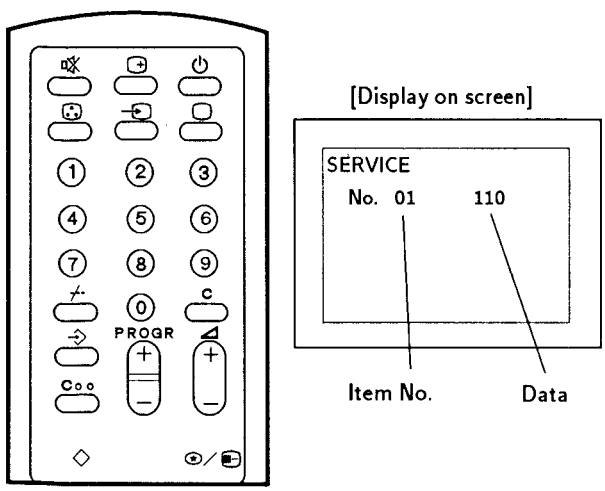
Note : When you replaced IC 306, do not read data from memory before writing new data.



3. Adjusting picture quality

① Select one of item Nos. 01-29 that you want to be adjusted by using the remote commander buttons [1] and [4].

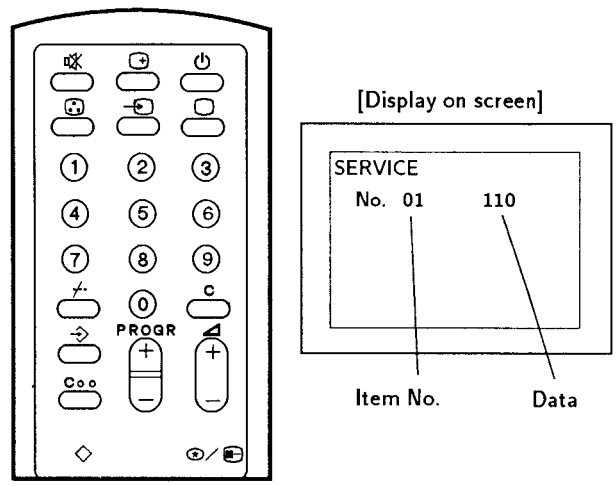
② Adjust picture quality using buttons [3] and [6] until the appropriate picture quality is obtained and the set values are satisfied.



4. Changing switch positions

① Select one of item Nos. B 01-B 02 that you want to be changed by using the remote commander buttons [1] and [4].

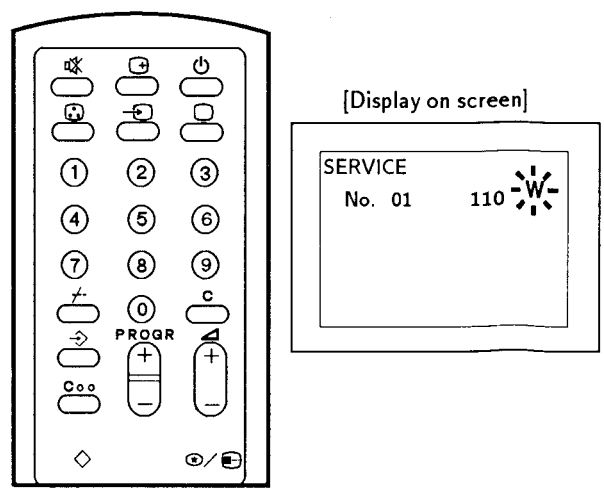
② The internal switches can be changed over using buttons [3] and [6]. Normally, you specify standard values. (See the table of service items.)



5. Writing to memory

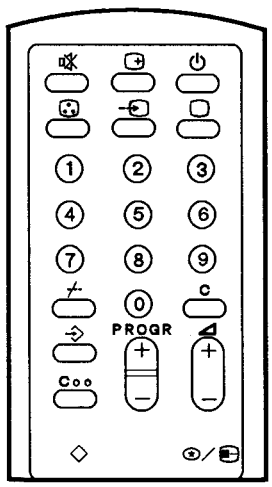
① After adjustment, adjust the switch-setting values, then write the adjustment data to memory using the [🔇] button. (Data cannot be written by only using the [🔇] button.)

Press the [C] button while the character " : " is blinking on the screen (within 3 seconds). It takes approximately 3 seconds from when the [C] button is pressed to when writing to memory is completed. Writing to memory is completed when the character " : " stops blinking and goes out.

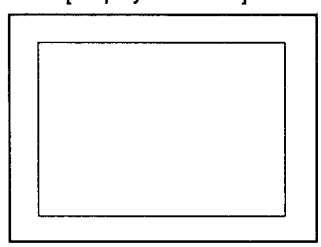


6. Terminating service mode

① Unplug the power cord of the TV and plug it in again. When this is done, the indication of SERVICE MODE goes out and the unit enters normal TV mode.



[Display on screen]



[TV/VIDEO MODE]

4-2. A BORAD ADJUSTMENTS

RF AGC Adjustment

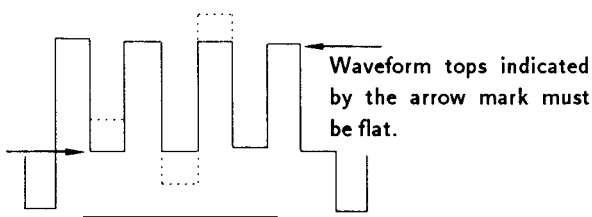
1. Receive the color bar signal. (RF signal)
2. Picture : 80%
3. Brightness : standard
4. Adjust the IF pack AGC knob until snow noise and cross modulation are eliminated.
5. Confirm the above in each channel.

VCO Adjustment

1. Receive the color bar signal and place the set into service mode.
2. Set a value with item 1 so that the screen beats.

SUB COLOR and SUB HUE Adjustments

1. Receive the color bar signal and place the set into service mode.
2. Connect an oscilloscope to the TP (blue output) of the circuit board C, then press the STANDARD button using the remote commander.
3. Next, adjust the oscilloscope waveform with item 19 and 20 until the waveform shown below is obtained. Then, set sub-color to a value three steps up.



NO	Item name
19	Sub hue
20	Sub color

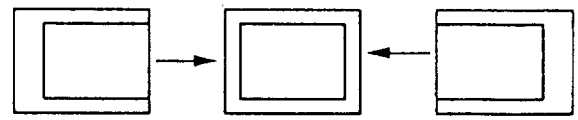
Note :

When sub-contrast, sub-hue or sub-color is adjusted, picture qualities in video 1 and video 2 are no longer STANDARD (independently stored in memory). Select video 1 and video 2 using the remote commander (TV/VIDEO) button, then press the (STANDARD) button for each.

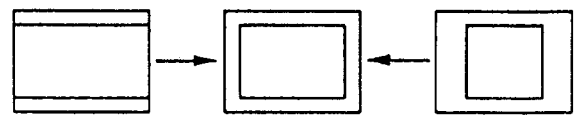
Picture qualities in video 1 and video 2 can be made to STANDARD even when you set "channel selection , standad" with buttons (8) and (12) after writing data to memory.

ADJUSTING DEFLECTION

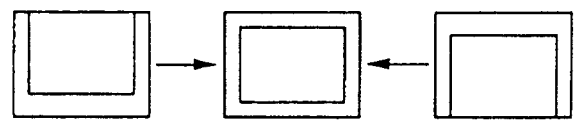
Horizontal position (item NO. 9) 0~31
H. CENT



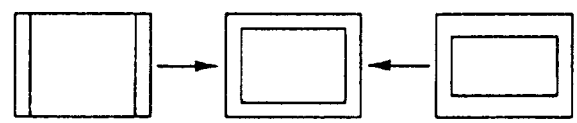
Horizontal amplitude (item NO. 10) 0~63
H. SIZE



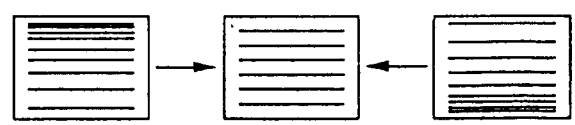
Vertical position (item NO. 2) 0~63
V. CENT



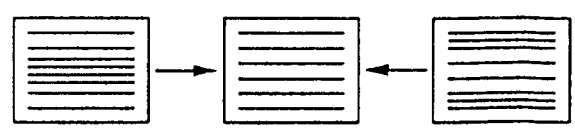
Vertical amplitube (item NOs. 3, 4) 0~255
V. SIZE



Vertical linearity (item NOs. 5, 6) L : 0~63, H : 0~63
V. ANGLE



Vertical character-S correction (item NOs. 7, 8)
L : 0~31, H : 0~255



• ITEM LIST

No.	Item name	Register name			Data rangh	Adjustment data			Remarks	Signal
		IC	LABEL	Bit length		PAL	SECAM	NTSC		
1	VCO	PVPU	VCOA	8	(−128)0～(+127)255	ADJ		ADJ	Adjusted with VCO free-run	CB
2	V center	Microprocessor	PWM output	8	0～63	ADJ	←	ADJ	Dummy-IM bus adjustment	SP CB
3, 4	Note 1) V size H&L	DPU	H 0 L, H 0 H	8+8	L(0～15), H(0～255)	ADJ	←	ADJ	V amplitude	〃
5, 6	Note 1) V linearity H&L	DPU	S 1 L, S 1 H	8+6	L(0～63), H(0～63)	ADJ	←	ADJ	V symmetry	〃
7, 8	Note 1) V character-S correction H&L	DPU	S 0 L, S 0 H	8+8	L(0～31), H(0～255)	ADJ	←	ADJ	S correction	〃
9	H center	DPU	SP	5	0～31	ADJ	←	ADJ		〃
10	H size	Microprocessor	PWM output	8	0～63	ADJ	←	ADJ	Dummy-IM bus adjustment	〃
11	H blanking	DPU	BP	6	0～63	$\overline{x}$	←	$\overline{x}$		〃
12	ACC level	PVPU	BA	6	0～63	$\overline{x}$	←	$\overline{x}$		CB
13	R drive	PVPU	WR	7	0～127	ADJ	←	←	AMB to be turned off.	W/CB
14	G drive	PVPU	WG	7	0～127	ADJ	←	←	〃	〃
15	B drive	PVPU	WB	7	0～127	ADJ	←	←	〃	〃
16	G cut-off	PVPU	CG	8	0～255	ADJ	←	←	〃	〃
17	B cut-off	PVPU	CB	8	0～255	ADJ	←	←	〃	〃
18	R cut-off	PVPU	CR	8	0～255	ADJ	←	←	〃	〃
19	Sub-hue 1	DTI	FSR 1, 2	8, 8		$\overline{x}$		ADJ	Shared with hue when DTI is on.	CB
20	Sub-color 1	DTI	FSR 1, 2	8, 8		ADJ		ADJ	Shared with color when DTI is on.	〃
21	Sub-bright	PVPU	BR	8	0～255				Shared with bright (user controllable).	W
22	External RGB contrast	PVPU	RGBC	6	0～63	$\overline{x}$	←	←		CB
23	Y/C delay	PVPU	LD	4	(−4) 0～(+4)8	$\overline{x}$	$\overline{x}$	$\overline{x}$		SP CB
24	External RGB delay Y	DTI	LDA	9	0～511	$\overline{x}$	←	$\overline{x}$		
25	External RGB delay C	DTI	CDA	9	0～511	$\overline{x}$	←	$\overline{x}$		
26	Sub-hue 2	SPU	SR, SB	6, 6	0～63		$\overline{x}$			CB
27	Sub-color 2	SPU	SR, SB	6, 6	0～63		$\overline{x}$			〃
28	DC offset R	SPU	OR	6	0～63		$\overline{x}$			〃
29	DC offset B	SPU	OB	6	0～63		$\overline{x}$			〃
B 01	Auto White Balance					0 : off(without IK pulse) 1 : off(IK pulse) 2 : Auto cut-off 3 : on				
B 02	DTI					0 : off 1 : on				

① ADJ : Must be adjusted for each set.

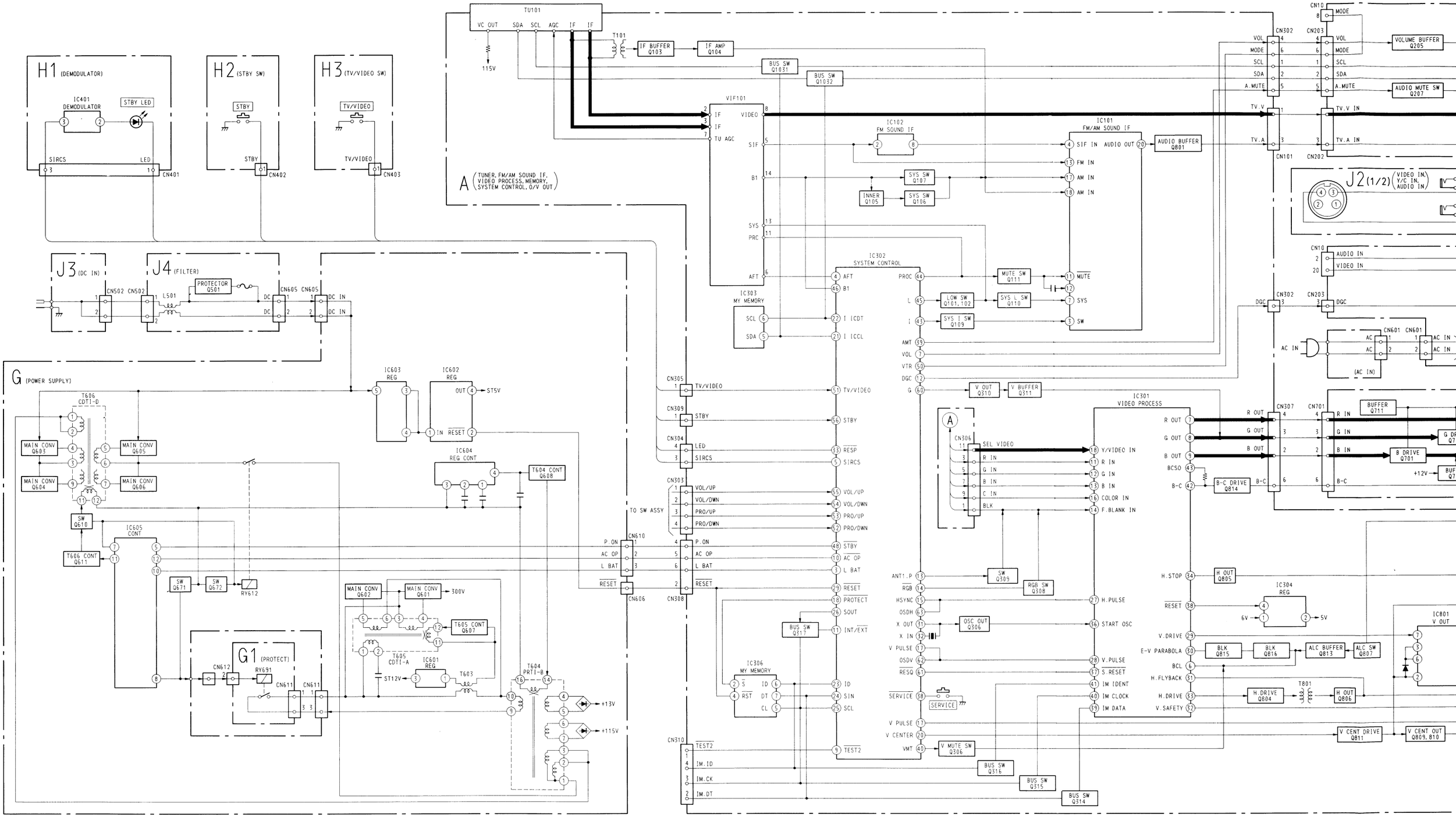
② $\overline{x}$: Must be treated as reference (fixed)value based on deviation between sets.

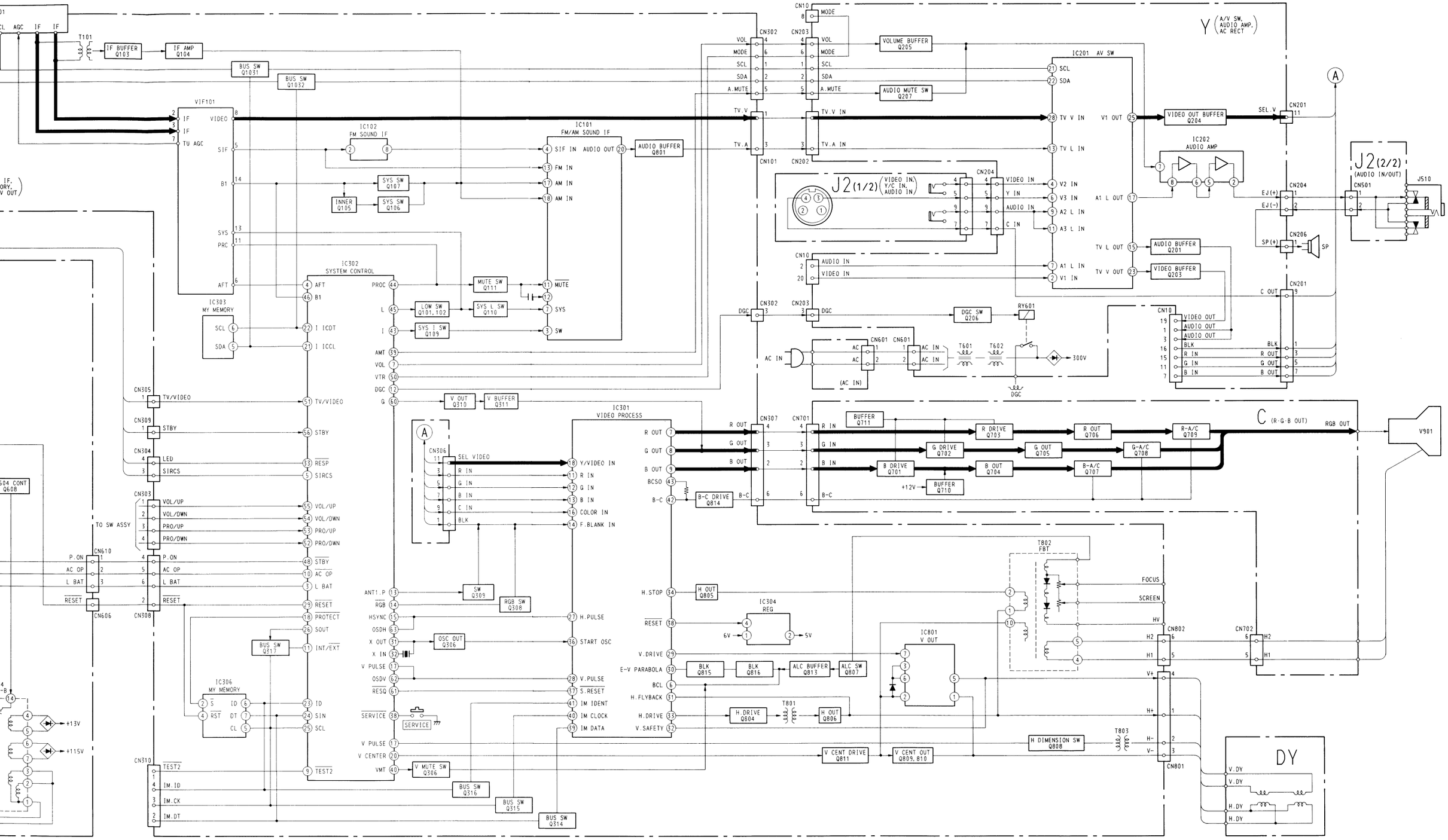
③ AWB : RGB cut-off and drive are automatically adjusted. [Mode 0] without IK pulse, countermeasures against claims ; [Mode 1] only AWB function unavailable, adjustment mode ; [Mode 2] Auto cut-off function only ; [Mode 3] Auto white balance function

Note 1 : Two adjustment modes are available, L-byte(fine adjustment) and H-byte(rough adjustment) .

SECTION 5
DIAGRAMS

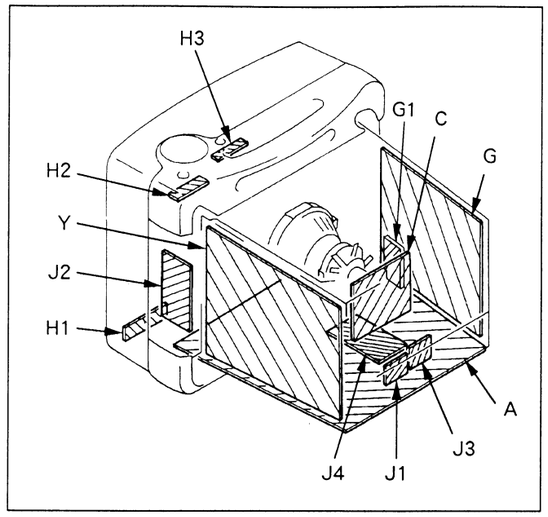
5-1. BLOCK DIAGRAM




T101
IF BUFFER Q103
IF AMP Q104
BUS SW Q1031
BUS SW Q1032
VIF101
IF
VIDEO
TU AGC
SIF
B1
SYS
PRC
AFT
IC102 FM SOUND IF
IC101 FM/AM SOUND IF
SIF IN
AUDIO OUT
AUDIO BUFFER Q801
FM IN
AM IN
SYS SW Q107
INNER Q105
SYS SW Q106
IC302 SYSTEM CONTROL
IC303 MY MEMORY
SCL
SDA
I ICDT
I ICCL
PROC
L
I
AMT
VOL
VTR
DGC
G
MUTE SW Q111
LOW SW Q101,102
SYS L SW Q110
SYS I SW Q109
V OUT Q310
V BUFFER Q311
CN305 TV/VIDEO
CN309 STBY
CN304 LED RESP SIRCS
CN303 VOL/UP VOL/DWN PRO/UP PRO/DWN
CN610 P.ON AC OP L BAT RESET
CN606
CN308 P.ON STBY AC OP L BAT RESET PROTECT SOUT INT/EXT ID SIN SCL
TO SW ASSY
BUS SW Q317
IC306 MY MEMORY
CN310 TEST2 IM.ID IM.CK IM.DT
BUS SW Q316
BUS SW Q315
BUS SW Q314
IC301 VIDEO PROCESS
CN306 SEL VIDEO R IN G IN B IN C IN BLK
Y/VIDEO IN
R IN
G IN
B IN
COLOR IN
F.BLANK IN
ANT1.P
RGB
HSYNC
OSDH
X OUT
X IN
V PULSE
OSDV
RESQ
SERVICE
V CENTER
VMT
SW Q309
RGB SW Q308
OSC OUT Q306
V MUTE SW Q306
H.PULSE
START OSC
V.PULSE
S.RESET
IM IDENT
IM CLOCK
IM DATA
CN10 MODE
CN302 CN203 VOL MODE SCL SDA A.MUTE
VOLUME BUFFER Q205
AUDIO MUTE SW Q207
TV.V
TV.A
CN101 CN202 TV.V IN TV.A IN
IC201 AV SW
SCL SDA
TV V IN
TV L IN
V1 OUT
VIDEO OUT BUFFER Q204
IC202 AUDIO AMP
A1 L OUT
TV L OUT
TV V OUT
AUDIO BUFFER Q201
VIDEO BUFFER Q203
J2 (1/2) (VIDEO IN, Y/C IN, AUDIO IN)
CN204 VIDEO IN Y IN AUDIO IN C IN
V2 IN
V3 IN
A2 L IN
A3 L IN
A1 L IN
V1 IN
AUDIO IN
VIDEO IN
DGC
DGC SW Q206
RY601
AC IN
CN601
T601
T602
300V
(AC IN)
CN10 VIDEO OUT AUDIO OUT AUDIO OUT BLK R IN G IN B IN
BLK R OUT G OUT B OUT
C OUT
SEL.V
CN201
EJ(+) EJ(-)
CN204
SP(+)
CN206
SP
J2 (2/2) (AUDIO IN/OUT)
CN501
J510
Y (A/V SW, AUDIO AMP, AC RECT)
A
C (R·G·B OUT)
RGB OUT
V901
CN307 CN701
R OUT G OUT B OUT
BUFFER Q711
R DRIVE Q703
G DRIVE Q702
B DRIVE Q701
R OUT Q706
G OUT Q705
B OUT Q704
R-A/C Q709
G-A/C Q708
B-A/C Q707
+12V
BUFFER Q710
BCSO
B-C
B-C DRIVE Q814
T802 FBT
FOCUS
SCREEN
HV
H2
H1
V+
H+
H-
V-
CN802
CN702
CN801
H.STOP
RESET
V.DRIVE
E-V PARABOLA
BCL
H.FLYBACK
H.DRIVE
V.SAFETY
H OUT Q805
IC304 REG
6V
5V
BLK Q815
BLK Q816
ALC BUFFER Q813
ALC SW Q807
IC801 V OUT
H.DRIVE Q804
T801
H OUT Q806
V CENT DRIVE Q811
V CENT OUT Q809,810
H DIMENSION SW Q808
T803
DY
V.DY
H.DY
+13V
+115V
504 CONT Q608

KV-M1100D
RM-818

5-2. CIRCUIT BOARDS LOCATION



Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS — CONDUCTOR SIDE —

Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50 WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm Rating electrical power 1/10W

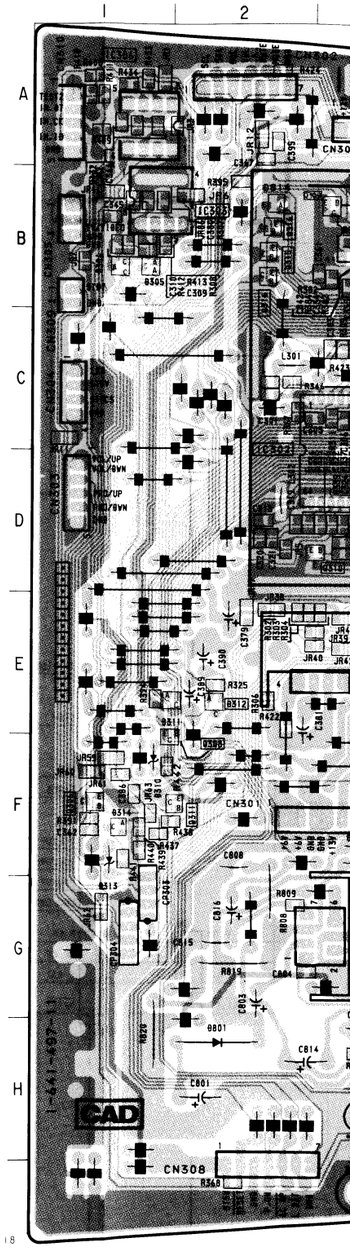
- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10 MΩ digital multimeter.
- Readings are taken with a PAL color-bar signal input.
- : adjustment for repair.
- Voltage variations may be noted due to normal production tolerance.
- ▬▬ : B+ bus.
- ▬ ▬ : B− bus.
- : signal path.

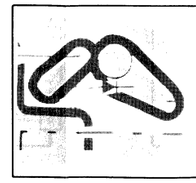
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

IC		DIODE	
IC101	D-7	D101	C-7
IC102	D-7	D102	C-8
IC301	B-4	D305	D-6
IC302	C-4	D306	E-6
IC303	B-1	D310	E-8
IC304	E-3	D311	E-8
IC305	E-4	D312	E-8
IC306	A-1	D313	E-7
IC801	G-3	D314	D-7
		D315	D-8
TRANSISTOR		D801	D-8
		D802	F-1
Q101	C-7	D807	C-5
Q102	C-8	D810	F-2
Q103	D-6	D811	B-3
Q104	E-6	D812	D-3
Q105	E-8	D813	F-2
Q106	E-8	D814	B-2
Q107	E-8		
Q108	E-7	TEST POINT	
Q109	D-7		
Q110	D-8	TP103	B-9
Q111	D-8		
Q306	F-1		
Q307	C-5		
Q308	F-2		
Q309	B-3		
Q310	D-3		
Q311	F-2		
Q314	B-2		
Q315	B-2		
Q316	B-2		
Q317	C-5		
Q804	H-3		
Q805	H-6		
Q806	F-6		
Q807	H-6		
Q808	F-4		
Q809	H-5		
Q810	H-5		
Q811	H-6		
Q813	G-5		
Q814	A-4		
Q815	B-4		
Q816	B-3		
Q1031	C-7		
Q1032	C-6		

A TUNER FM/AM SOUND I
VIDEO PROCESS MEMOR
SYSTEM CONTROL H/V C

— A board —





NOTE:
The circuit
600 Vp-p.
inspection

ARBON
USIBLE
/IREWOUND
IETAL OXIDE
EMENT

STER
ROPYLENE

RE

IC	
IC101	D-7
IC102	D-7
IC301	B-4
IC302	C-4
IC303	B-1
IC304	E-3
IC305	E-4
IC306	A-1
IC801	G-3

TRANSISTOR	
Q101	C-7
Q102	C-8
Q103	D-6
Q104	E-6
Q105	E-8
Q106	E-8
Q107	E-8
Q108	E-7
Q109	D-7
Q110	D-8
Q111	D-8
Q306	F-1
Q307	C-5
Q308	F-2
Q309	B-3
Q310	D-3
Q311	F-2
Q314	B-2
Q315	B-2
Q316	B-2
Q317	C-5
Q804	H-3
Q805	H-6
Q806	F-6
Q807	H-6
Q808	F-4
Q809	H-5
Q810	H-5
Q811	H-6
Q813	G-5
Q814	A-4
Q815	B-4
Q816	B-3
Q1031	C-7
Q1032	C-6

DIODE	
D101	C-7
D102	C-8
D305	D-6
D306	E-6
D310	E-8
D311	E-8
D312	E-8
D313	E-7
D314	D-7
D315	D-8
D801	D-8
D802	F-1
D807	C-5
D810	F-2
D811	B-3
D812	D-3
D813	F-2
D814	B-2

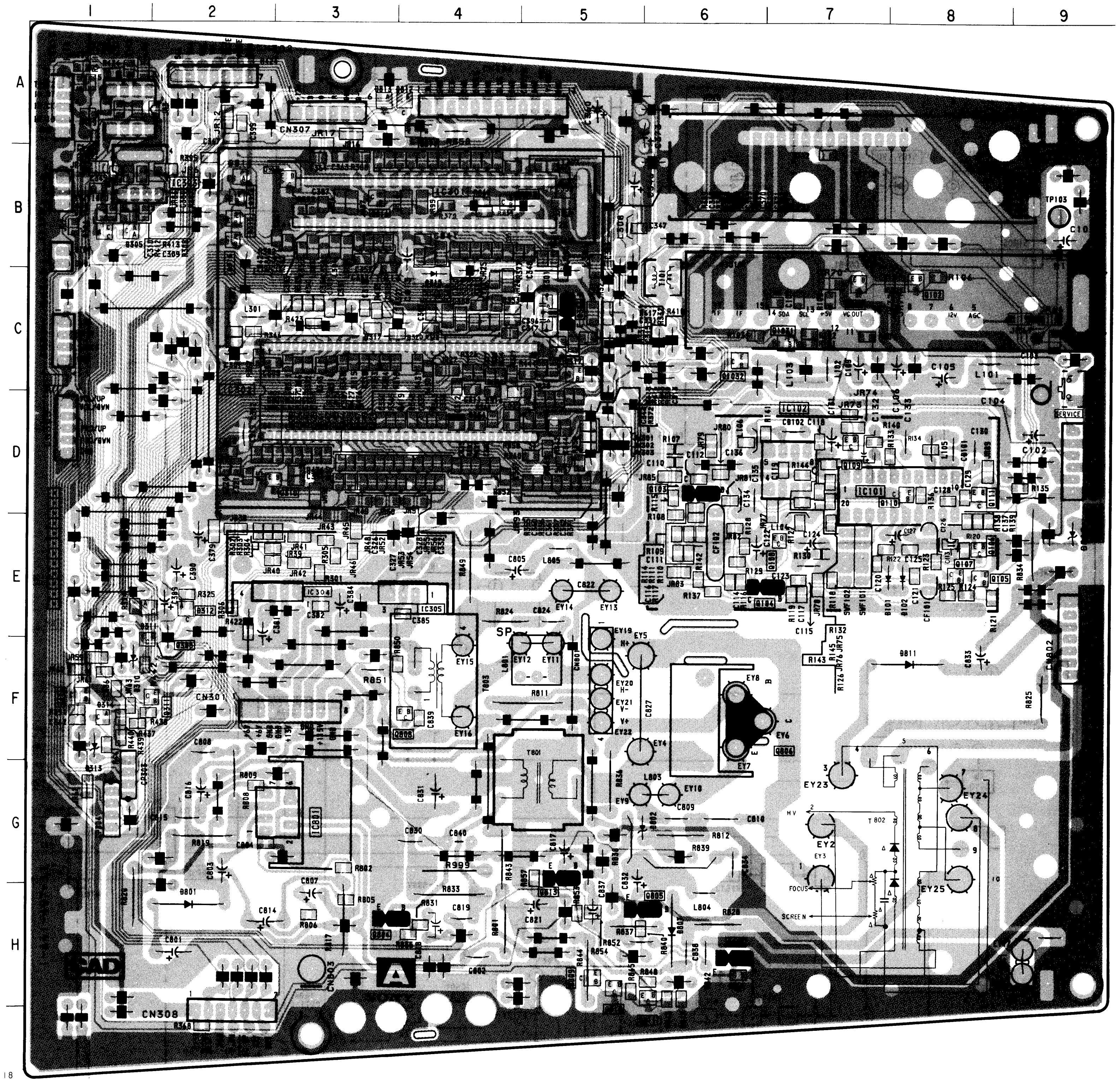
TEST POINT	
TP103	B-9

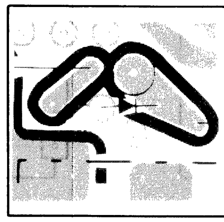
A (TUNER FM/AM SOUND IF VIDEO PROCESS MEMORY SYSTEM CONTROL H/V OUT)

— A board —

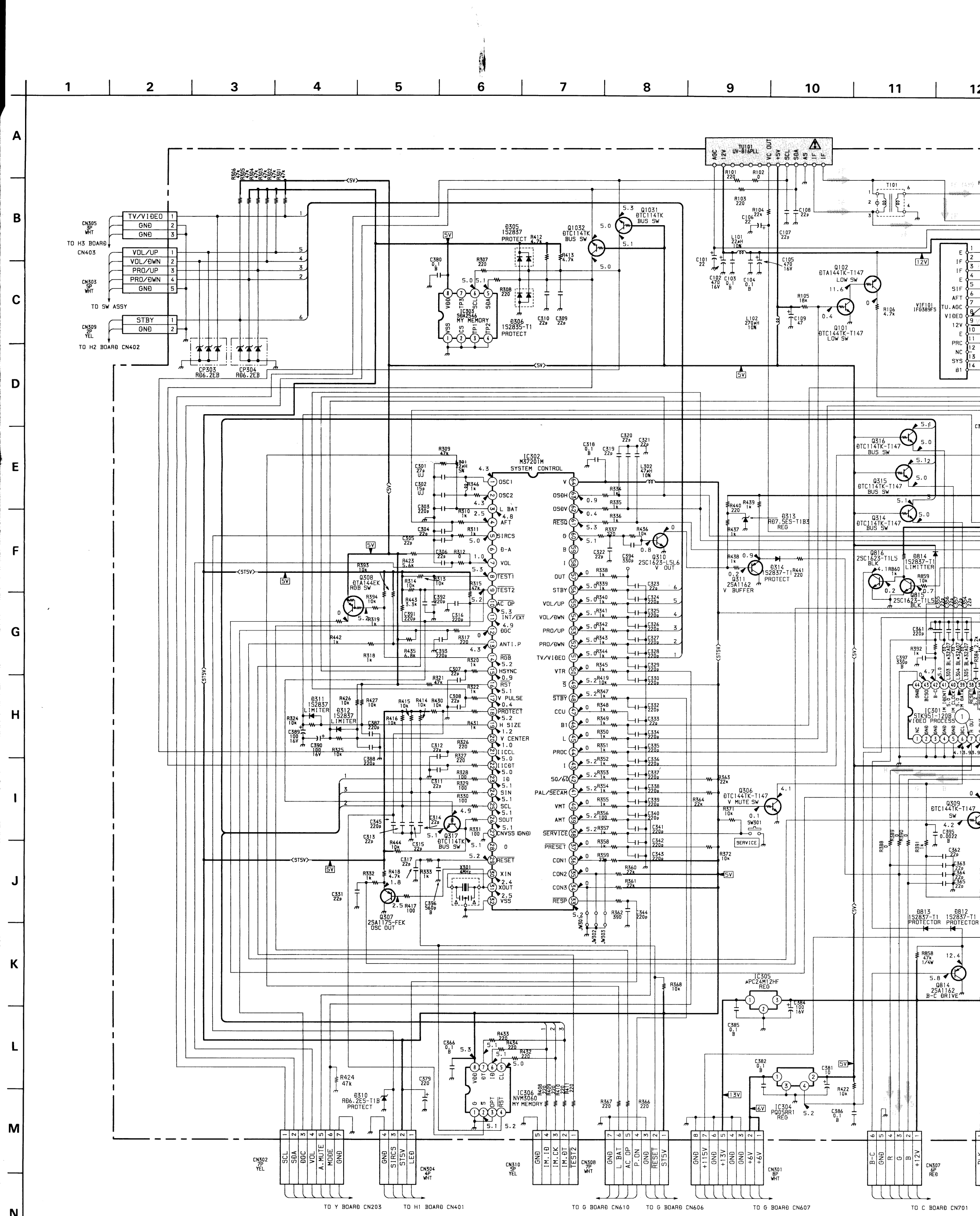
Note :

- ░░ : Pattern from the side which enables seeing.
- ░░ : Pattern of the rear side.





NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.


TV/VIDEO
GND
GND
VOL/UP
VOL/DWN
PRO/UP
PRO/DWN
GND
STBY
GND
TO H3 BOARD CN403
TO SW ASSY
TO H2 BOARD CN402
CP303 RD6.2EB
CP304 RD6.2EB
TU101 UV-B16PLL
IC302 M37201M SYSTEM CONTROL
IC303 S8A2546 MY MEMORY
IC306 NVM3060 MY MEMORY
IC301 STK951-120B VIDEO PROCESS
IC305 μPC24M12HF REG
IC304 PQ05RR1 REG
VIF101 IFG389F5
Q1031 DTC114TK BUS SW
Q1032 DTC114TK BUS SW
Q102 DTA144TK-T147 LOW SW
Q101 DTC144TK-T147 LOW SW
Q316 DTC114TK-T147 BUS SW
Q315 DTC114TK-T147 BUS SW
Q314 DTC114TK-T147 BUS SW
Q306 DTC144TK-T147 V MUTE SW
Q309 DTC144TK-T147 SW
Q317 DTC114TK BUS SW
Q308 DTA144EK RGB SW
Q307 2SA1175-FEK OSC OUT
Q310 2SC1623-L5L6 V OUT
Q311 2SA1162 V BUFFER
Q816 2SC1623-T1L5 BLK
Q815 2SC1623-T1L5 BLK
Q814 2SA1162 B-C DRIVE
D305 1S2837 PROTECT
D306 1S2835-T1 PROTECT
D311 1S2837 LIMITER
D312 1S2837 LIMITER
D313 RD7.5ES-T1B3 REG
D314 1S2837-T1 PROTECT
D310 RD6.2ES-T1B PROTECT
D813 1S2837-T1 PROTECTOR
D812 1S2837-T1 PROTECTOR
D815 1S2837-T1 LIMITTER
X301 4MHz
SW301
SERVICE
CN302 7P YEL
CN304 4P WHT
CN310 5P YEL
CN308 7P WHT
CN301 8P WHT
CN307 6P RED
TO Y BOARD CN203
TO H1 BOARD CN401
TO G BOARD CN610
TO G BOARD CN606
TO G BOARD CN607
TO C BOARD CN701

A (TUNER FM/AM SOUNÐ IF
VIÐEO PROCESS MEMORY
SYSTEM CONTROL H/V OUT)

SDA AS IF IF

T101

Q103 BF199 IF BUFFER

Q104 BF959 IF AMP

Q105 2SC1623 INNER

Q106 2SC1623 SYS SW

Q107 2SC1623 SYS SW

Q108 2SC1623 AUÐIO BUFFER

Q109 ÐTC144TK-T147 SYS I SW

Q110 2SC1623 SYS L SW

Q111 2SC1623 MUTE SW

Q101 ÐTC144TK-T147 LOW SW

Q102 ÐTA144TK-T147 LOW SW

Q316 ÐTC114TK-T147 BUS SW

Q315 ÐTC114TK-T147 BUS SW

Q314 ÐTC114TK-T147 BUS SW

Q309 ÐTC144TK-T147 SW

Ð101 155238 PROTECT

Ð102 155238 PROTECT

Ð103 1S2837-T1 PROTECTOR

Ð104 1S2837-T1 PROTECTOR

Ð105 1S2837-T1 LIMITTER

Ð106 1S133 PROTECT SW

Ð107 ÐGP08Ð PROTECT

Ð108 RD6.2ESB2 REG

Ð109 RD36ESB2 REG

Ð110 RGP10G +25V-RCET

Ð111 RGP10G +180V-RECT

Ð112 RGP10G +12V-RCET

IC101 TDA2460-2 FM/AM SOUNÐ IF

IC102 TBA129 2.0 FM SOUNÐ IF

IC301 STK951-120B VIÐEO PROCESS

IC801 TDA8175 V OUT

Q801 GP08Ð PROTECT

Q802 RD6.2ESB2 REG

Q803 2SD2089 H OUT

Q804 2SC2688-LK H ÐRIVE

Q805 2SA1016K-F H OUT

Q806 2SD2089 H OUT

Q807 2SC2785 ALC SW

Q808 2SC1623 H ÐIMENSION SW

Q809 2SC1623 V CENT OUT

Q810 2SA1162 V CENT OUT

Q811 2SC1623 V CENT ÐRIVE

Q813 2SC2785 ALC BUFFER

Q814 2SA1162 B-C ÐRIVE

Q815 2SC1623-T1L5 BLK

Q816 2SC1623-T1L5 BLK

SWF101 41.0M

SWF102 32.4M

CF101 SFT5.5MA

CF102 SFT6.0MA

CB101 CBA5.5ME8

CB102 CBA6.0MEB

VIF101 IFG389F5

L103 3.3µH 10%

L104 1.5µH 10%

L105 8.2µH 10%

L106 12µH 10%

L301 BL=32A07

L302 BL=32A07

L303 BL=32A07

L304 BL=32A07

L305 BL=32A07

L306 BL=32A07

L307 BL=32A07

L308 3.9µH

L309 47µH

T801 PCT

T802 JE16T

CN101 6P BLK
6 GNÐ
5 +12V
4 GNÐ
3 TV.A
2 GNÐ
1 TV.V
TO Y BOARÐ CN

CN801 4P WHT
4 V +
3 V −
2 H −
1 H +

CN802 7P WHT
7 GNÐ
6 H 2
5 H 1
4 N C
3 180V
2 N C
1 E
TO C BOARÐ

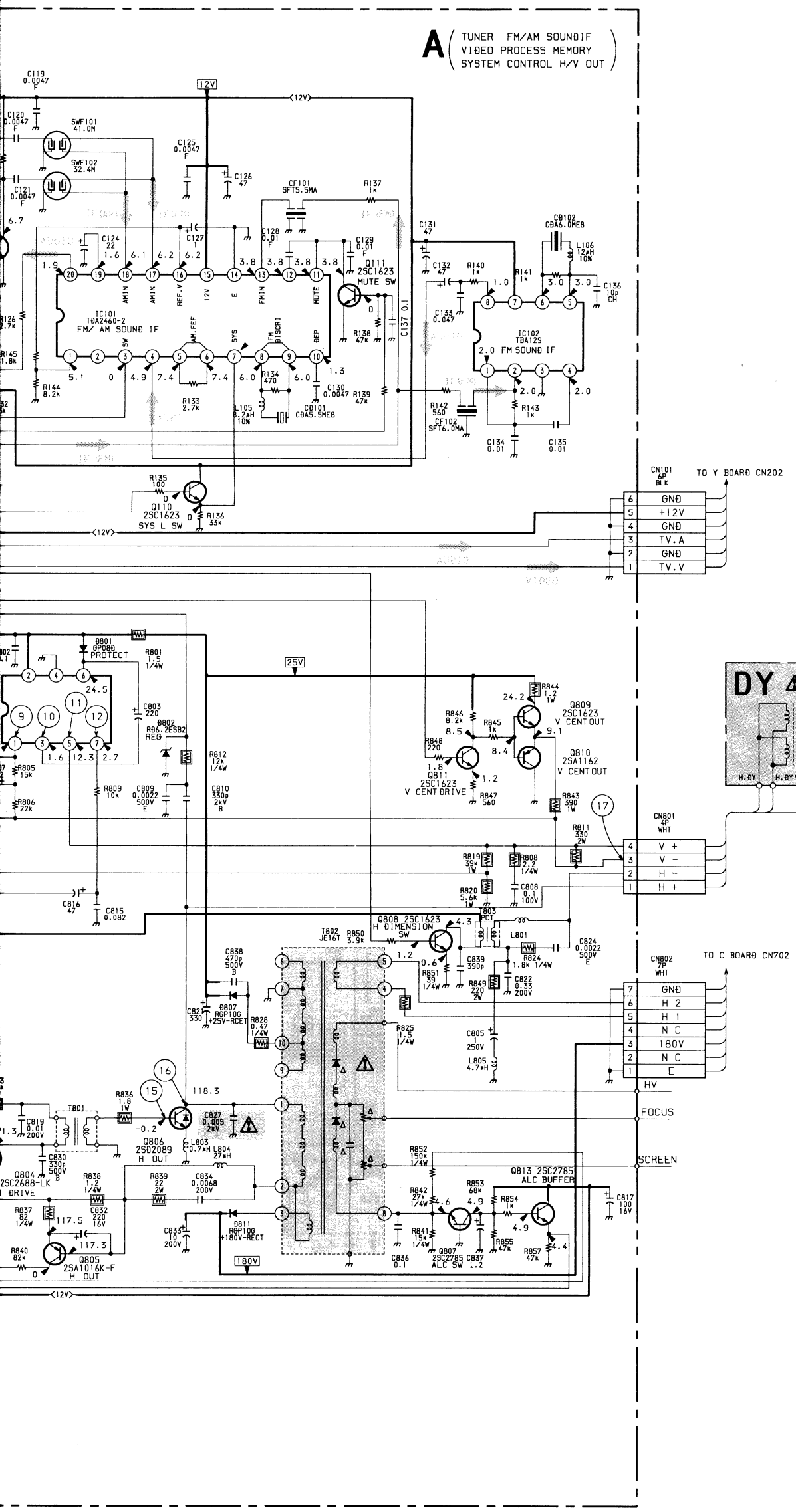
HV
FOCUS
SCREEN

CN307 6P RED
6 B-C
5 GNÐ
4 R
3 G
2 B
1 +12V
TO C BOARÐ CN701

CN306 12P WHT
1 BLK
2 GNÐ
3 REÐ
4 GNÐ
5 GREEN
6 GNÐ
7 BLUE
8 GNÐ
9 CHROMA
10 GNÐ
11 SEL VIÐEO
12 GNÐ
TO Y BOARÐ CN201

TO CN607

B-SS2862<AEP>-A..

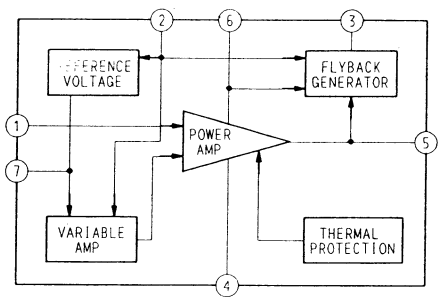


B-SS2862<AEP>-A..

WAVEFORMS A BOARD

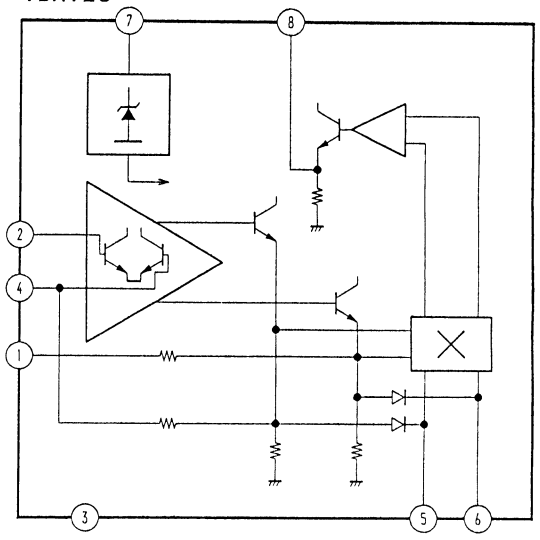
① 5.0Vp-p (H)	② 5.0 Vp-p (H)	③ 5.0 Vp-p(H)
④ 3.0Vp-p (H)	⑤ 3.4 Vp-p(V)	⑥ 5.0 Vp-p (H)
⑦ 4.8Vp-p (H)	⑧ (NTSC3.58) 1.6 Vp-p (H)	⑧ (NTSC4.43) 1.2 Vp-p (H)
⑧ (PAL) 1.4Vp-p (H)	⑧ (SECAM) 1.2 Vp-p (H)	⑨ 1.3 Vp-p (V)
⑩ 24.0Vp-p (V)	⑪ 48.0 Vp-p (V)	⑫ 2.8 Vp-p (V)
⑬ 2.5Vp-p (H)	⑭ 140.0 Vp-p (H)	⑮ 15.0 Vp-p (H)
⑯ 800.0 Vp-p (H)	⑰ 3.6Vp-p (V)	

A BOARD IC801 TDA8175



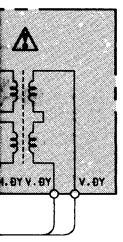
A BOARD IC102 TBA129

TBA129



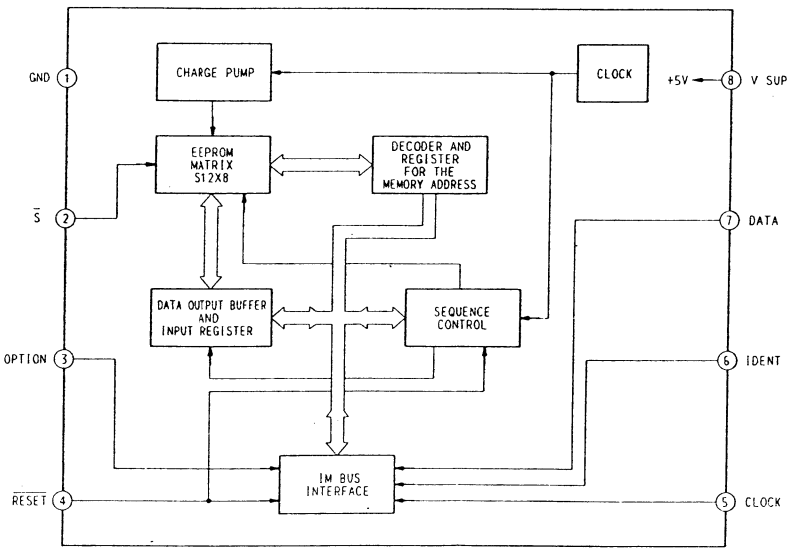
WAVEFORMS A BOARD

① 5.0Vp-p (H)	② 5.0 Vp-p (H)	③ 5.0 Vp-p(H)
④ 3.0Vp-p (H)	⑤ 3.4 Vp-p(V)	⑥ 5.0 Vp-p (H)
⑦ 4.8Vp-p (H)	⑧ (NTSC3.58) 1.6 Vp-p (H)	⑧ (NTSC4.43) 1.2 Vp-p (H)
⑧ (PAL) 1.4Vp-p (H)	⑧ (SECAM) 1.2 Vp-p (H)	⑨ 1.3 Vp-p (V)
⑩ 24.0Vp-p (V)	⑪ 48.0 Vp-p (V)	⑫ 2.8 Vp-p (V)
⑬ 2.5Vp-p (H)	⑭ 140.0 Vp-p (H)	⑮ 15.0 Vp-p (H)
⑯ 800.0 Vp-p (H)	⑰ 3.6Vp-p (V)	



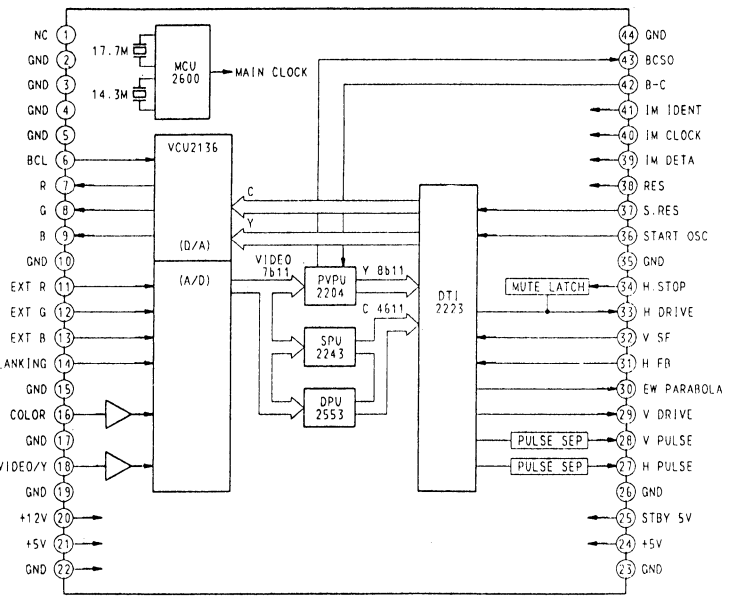
A BOARD IC306 NVM3060

A BOARD IC306



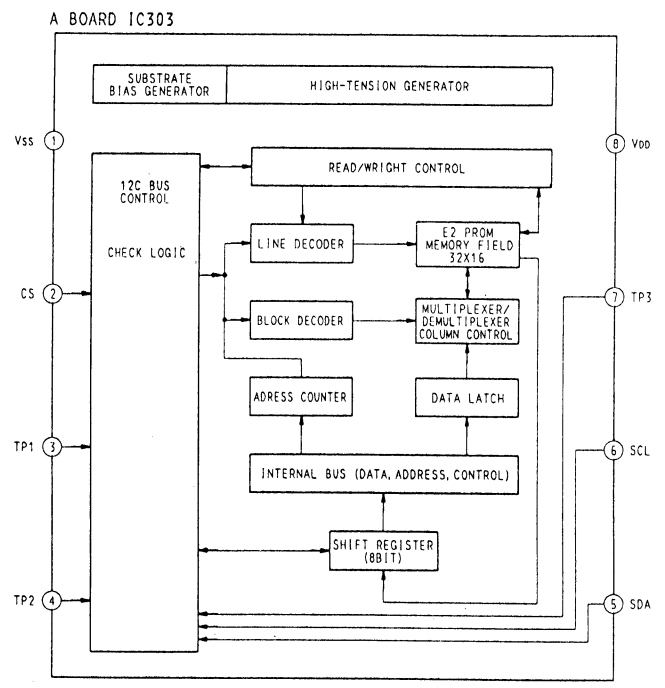
A BOARD IC301 STK951-120B

A BOARD IC301

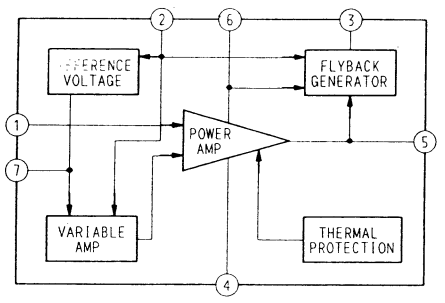


A BOARD IC303 SDA2546

A BOARD IC303

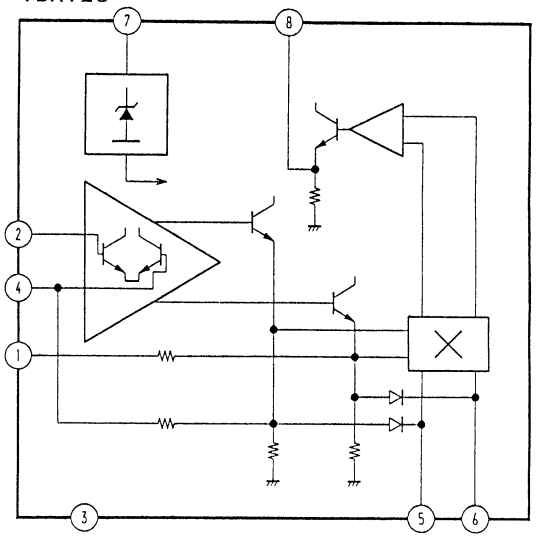


A BOARD IC801 TDA8175



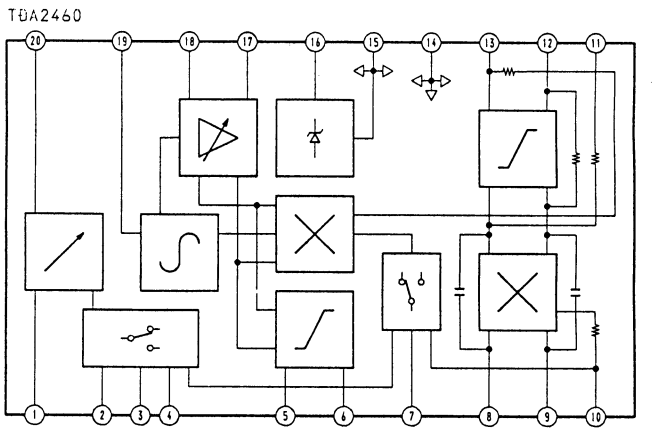
A BOARD IC102 TBA129

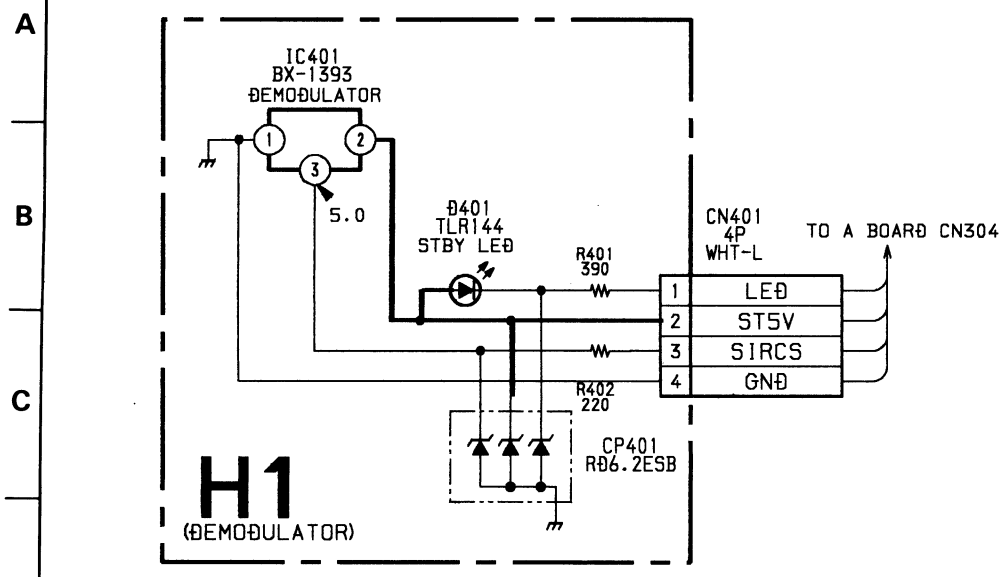
TBA129

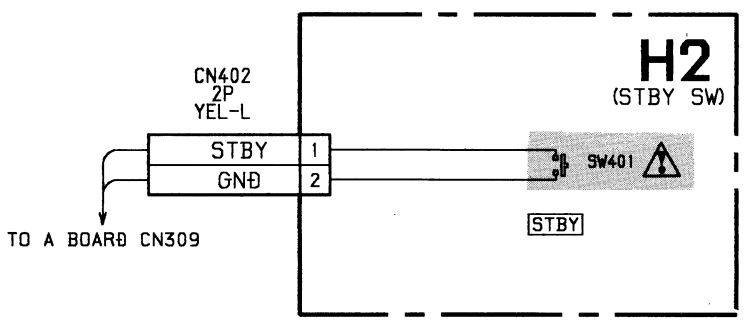


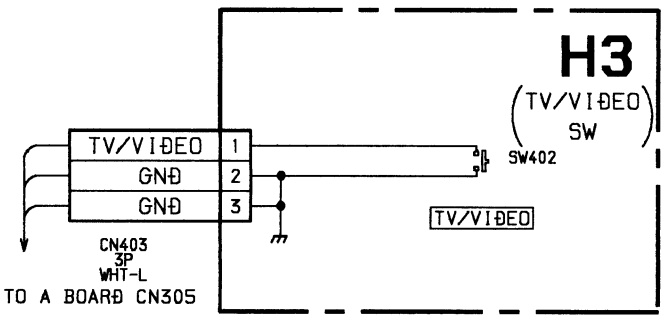
A BOARD IC101 TDA2460-2

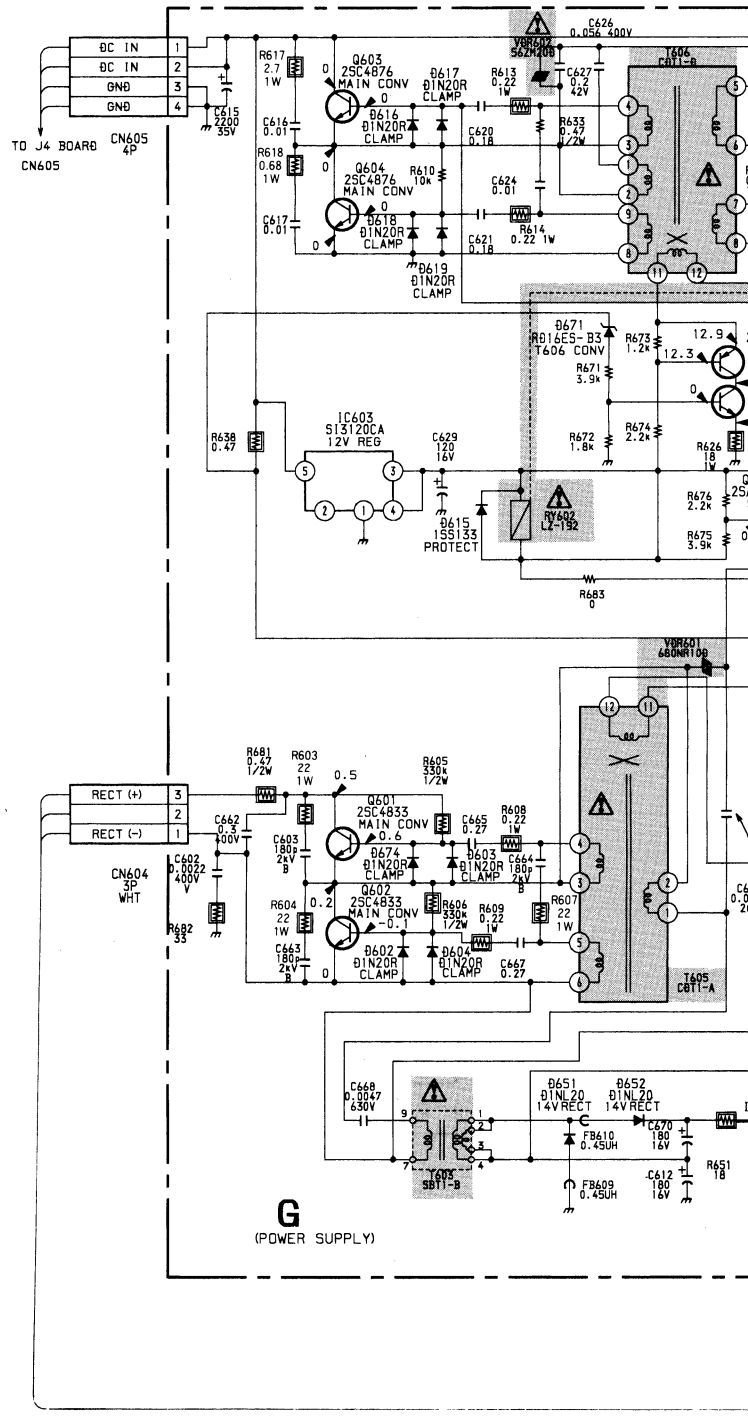
TDA2460





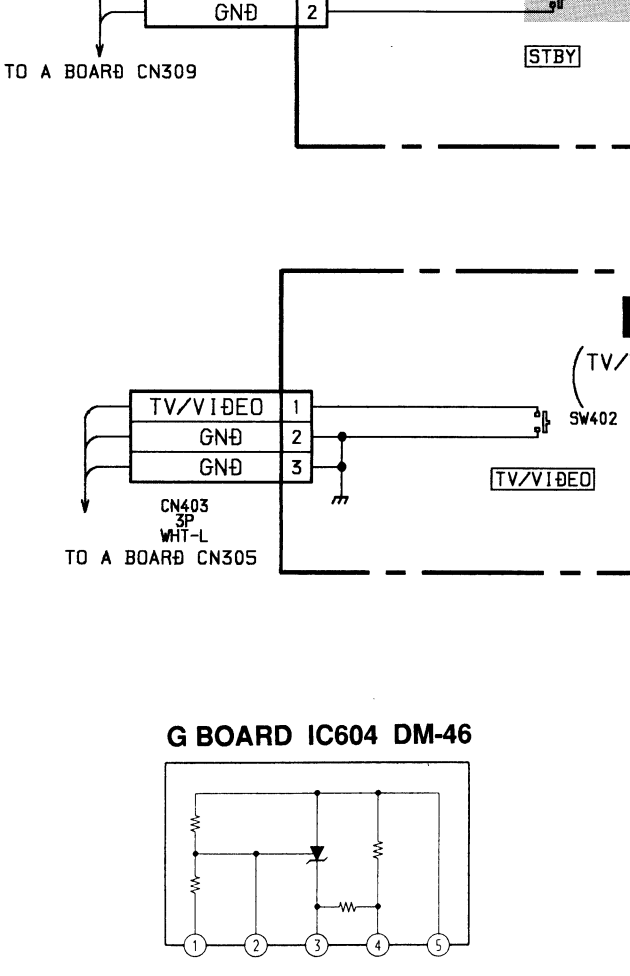




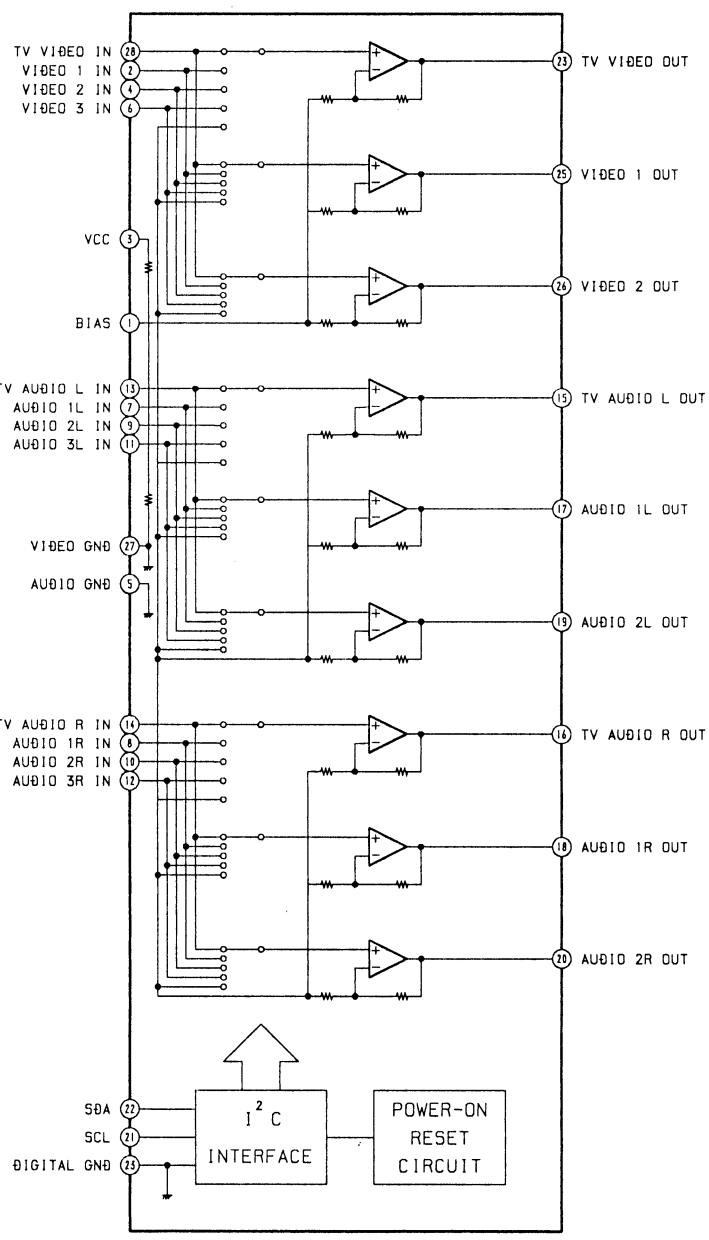


G BOARD IC604 DM-46

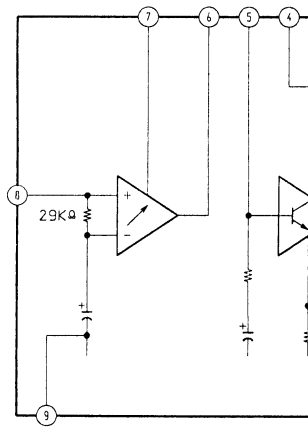
G BOARD IC605 DM-45



Y BOARD IC201 CXA1114P



Y BOARD IC202 TDA



8 9 10 11 12 13 14 15 16 17 18 19

CN611 3P WHT: CV IN, CV OUT

T606 CØT1-B · T604 PRT1-B · T605 CØT1-A · T603 SBT1-B

CN607 8P WHT: UNØV, UNØV, GNØ, GNØ, +13V, GNØ, +115V, GNØ → TO A BOARØ CN301

CN608 2P REØ: +13V, GNØ

CN610 4P WHT: P ON, AC OP, L BAT, GNØ → TO A BOARØ CN308

CN606 3P WHT: ST5V, RESET, GNØ → TO A BOARØ CN308

CN612 2P WHT-L: ST 12V, RY

CN612

Pitch:5mm

Rating electrical power:1/4W

G (POWER SUPPLY)

TO J1 BOARØ

CN601 2P: AC IN

CN602 2P: ØGC

CN202 6P BLK: TV.V, GNØ, TV.A, GNØ, +12V, GNØ → TO A BOARØ CN101

CN203 7P YEL: SCL, SØA, ØGC, VOL, A.MUTE, MØØE, GNØ → TO A BOARØ CN302

CN10 21P: AUØIO OUT, AUØIO IN, AUØIO OUT, GNØ, GNØ, AUØIO IN, BLUE, MØØE, GNØ, NC, GREEN, NC, GNØ, NC, REØ, BLK, GNØ, GNØ, VIØEO OUT, VIØEO IN, GNØ

) TV VIØEO OUT

) VIØEO 1 OUT

) VIØEO 2 OUT

) TV AUØIO L OUT

) AUØIO 1L OUT

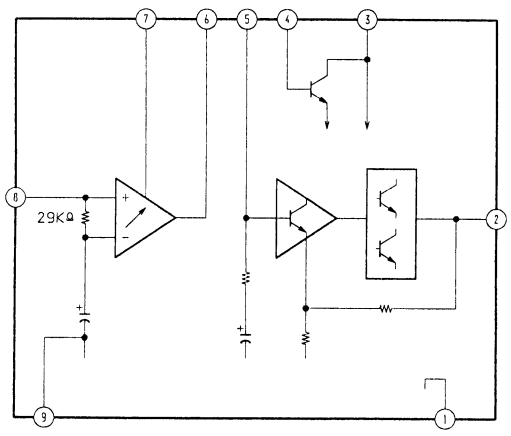
) AUØIO 2L OUT

) TV AUØIO R OUT

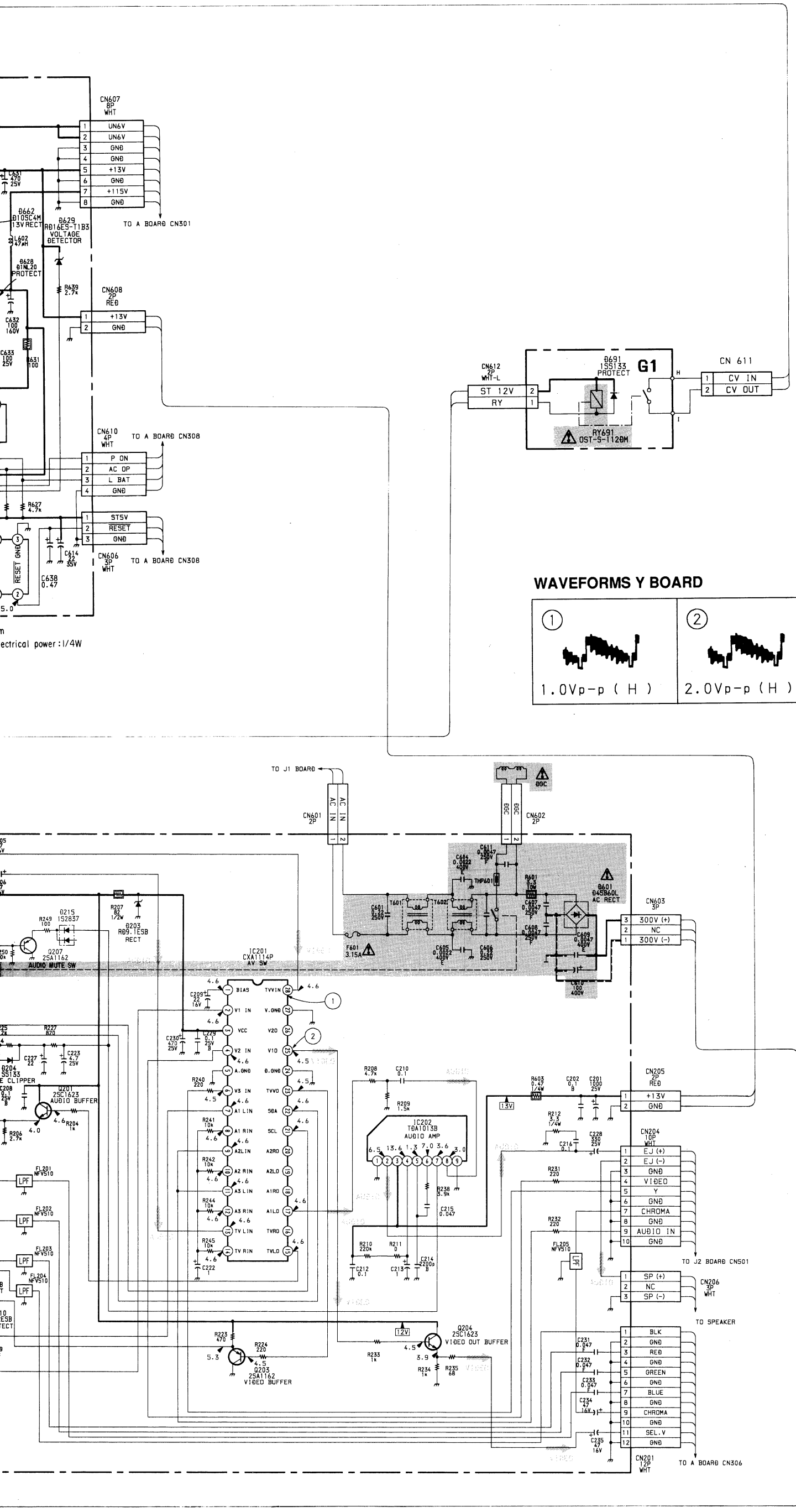
) AUØIO 1R OUT

) AUØIO 2R OUT

Y BOARD IC202 TDA1013B



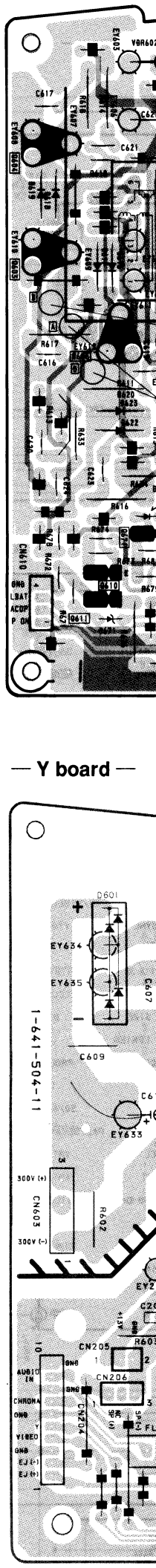
Y (A/V SW, AUDIO AMP, AC RECT)



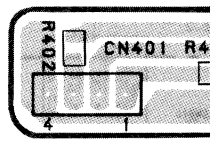
WAVEFORMS Y BOARD

①	②
1.0Vp-p (H)	2.0Vp-p (H)

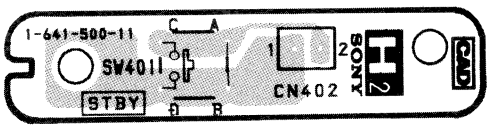
— Y board —



— H1 board —



— H2 board —



G1 (PROTECT) **G** (POWER SUPPLY) **Y** (A/V SW AUDIO AMP AC RECT) **H1** (DEMODULATOR) **H2** (STBY SW)

H3 (TV/VIDEO SW)

CN 611
1 CV IN
2 CV OUT

RD

②

2.0Vp-p (H)

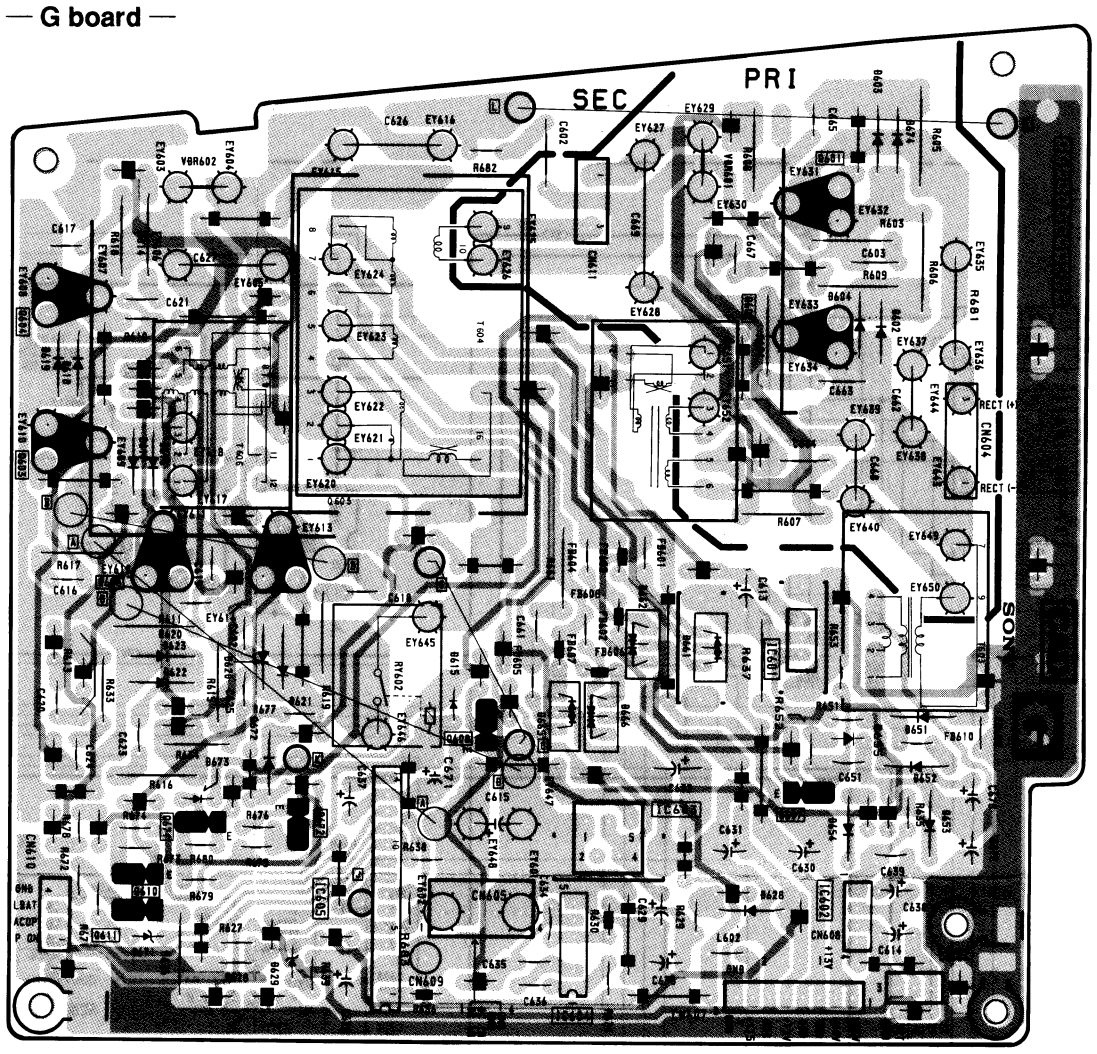
J2 BOARD CN501

CN206
5P
WHT

TO SPEAKER

A BOARD CN306

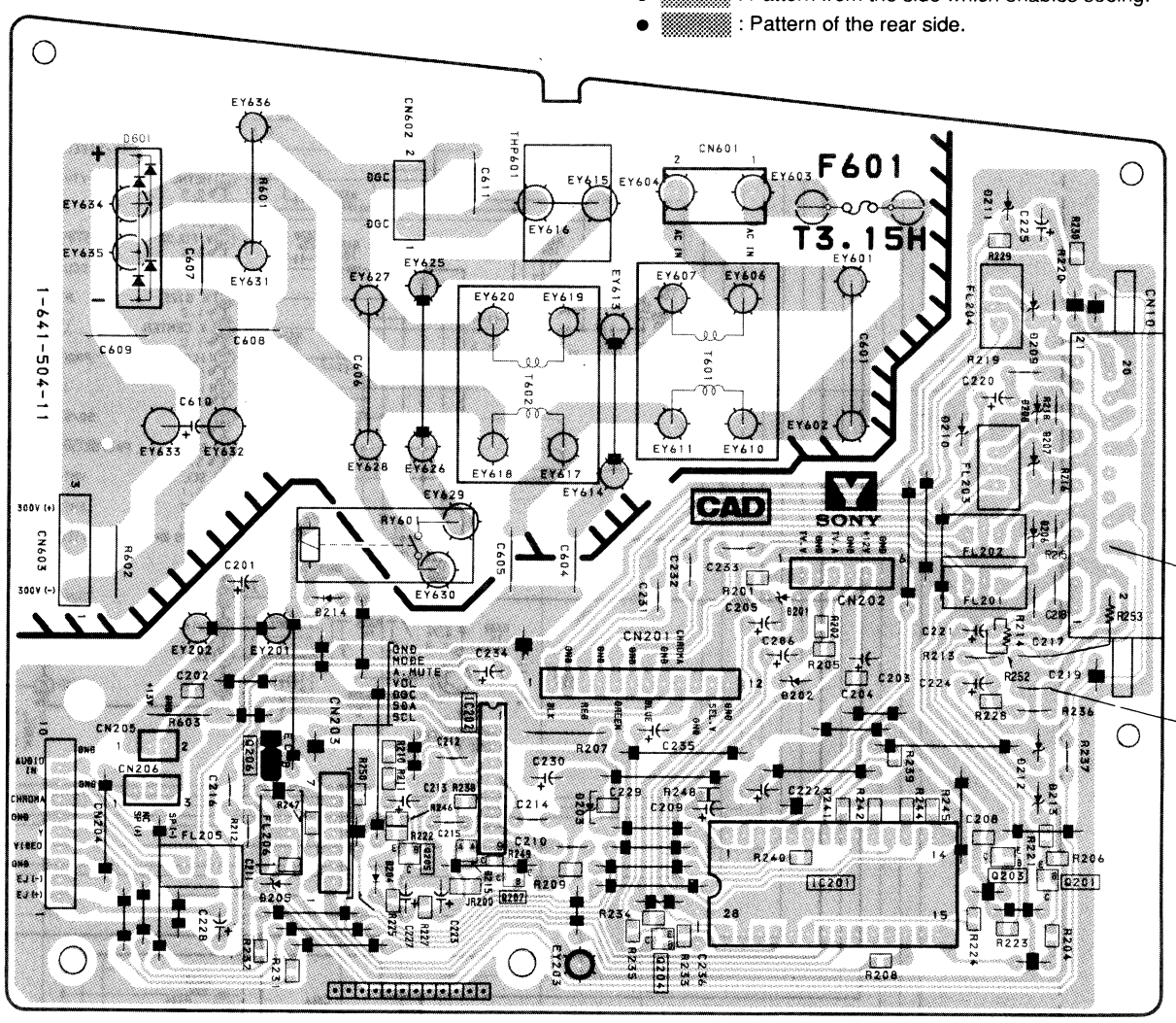
— G board —



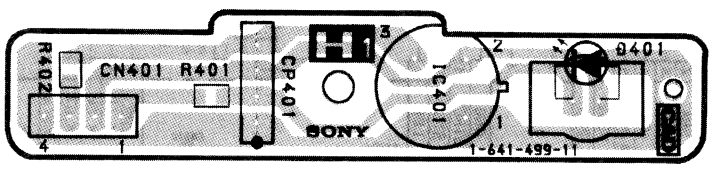
— Y board —

Note :

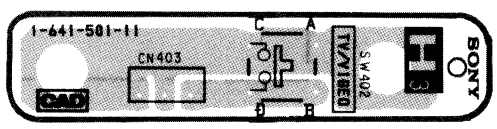
- ▒▒ : Pattern from the side which enables seeing.
- ▒▒ : Pattern of the rear side.



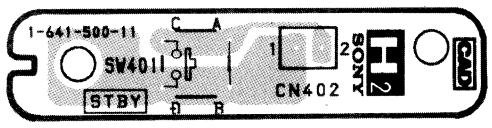
— H1 board —



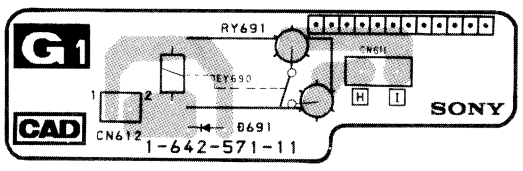
— H3 board —

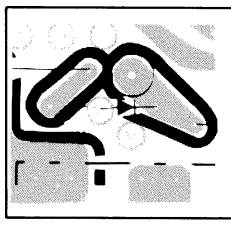


— H2 board —

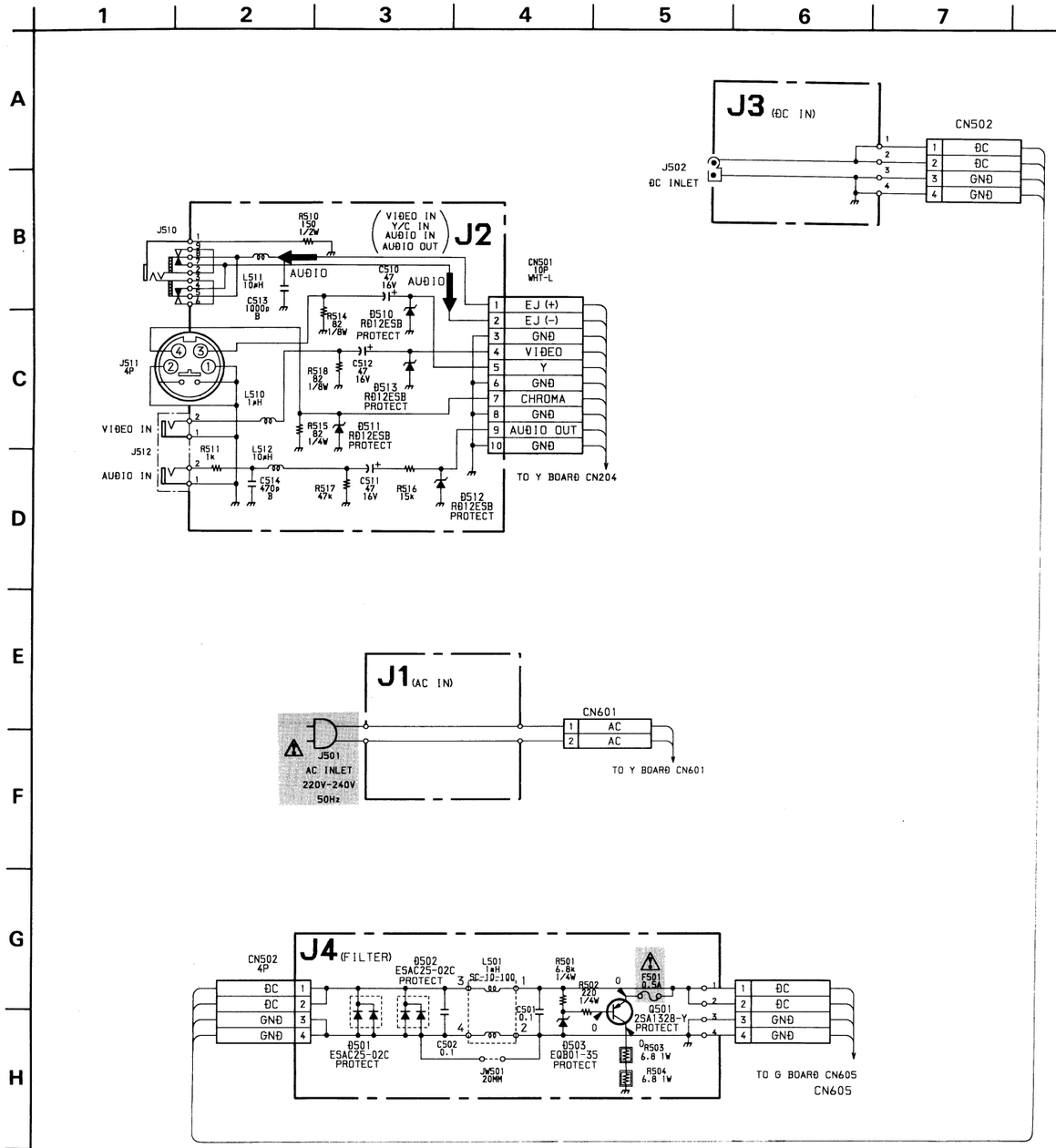


—G1 BOARD—



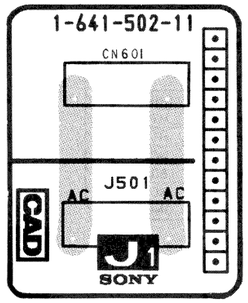


NOTE:
The circuit indicated as left contains
600 Vp-p. Care must be paid to preven
inspection or repairing.

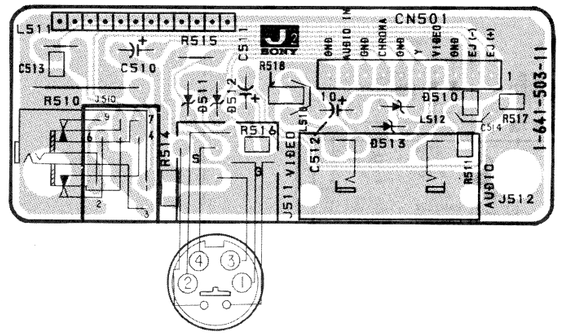


J1 (AC IN) **J2** (VIDEO IN / Y/C IN / AUDIO IN / AUDIO OUT) **J3** (DC IN) **J4** (FILTER)

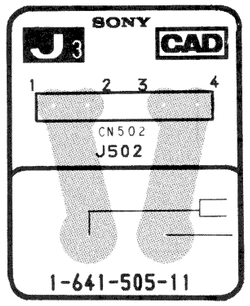
— J1 board —



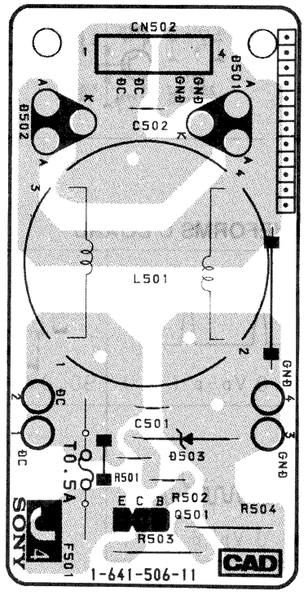
— J2 board —



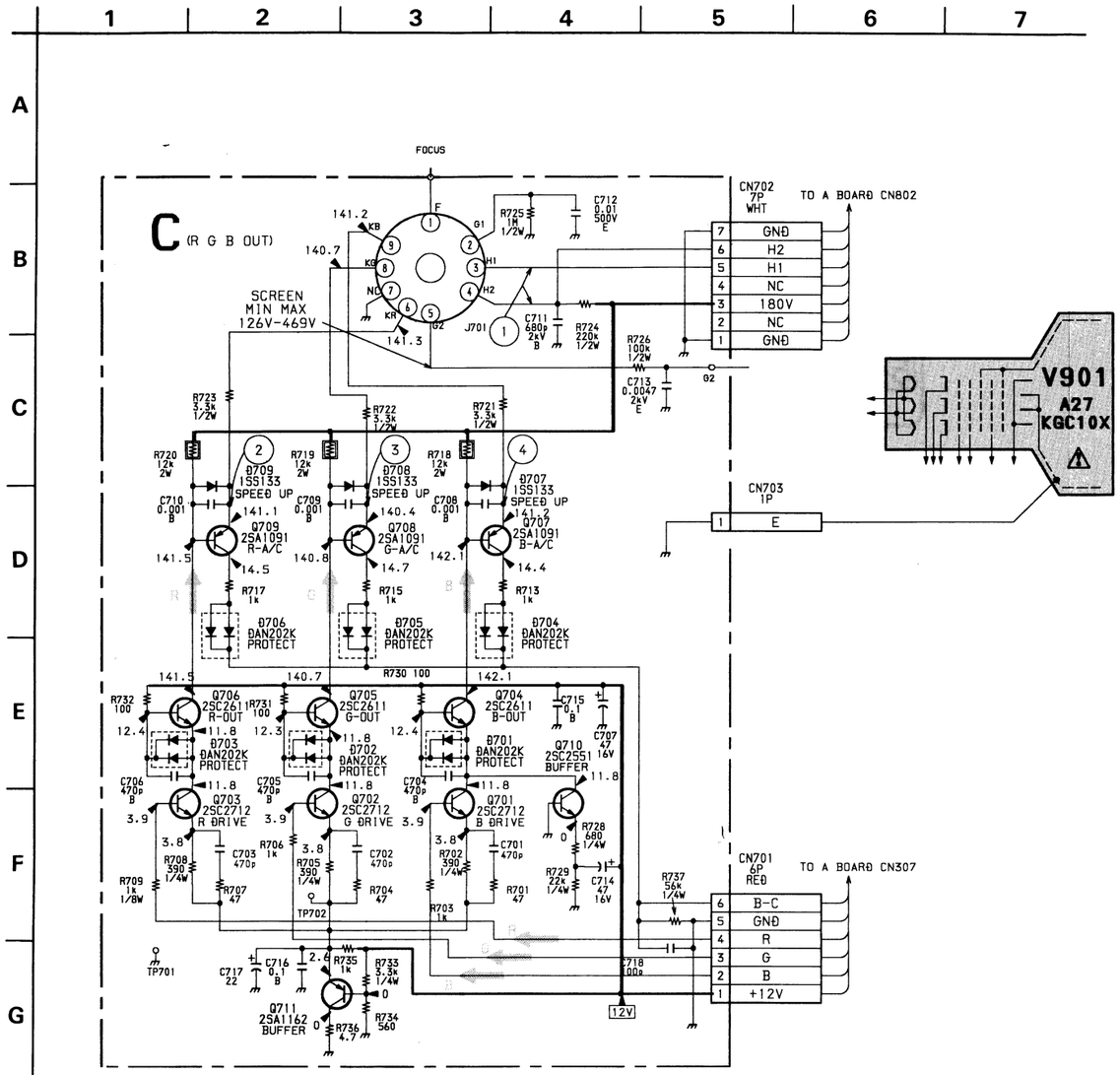
— J3 board —



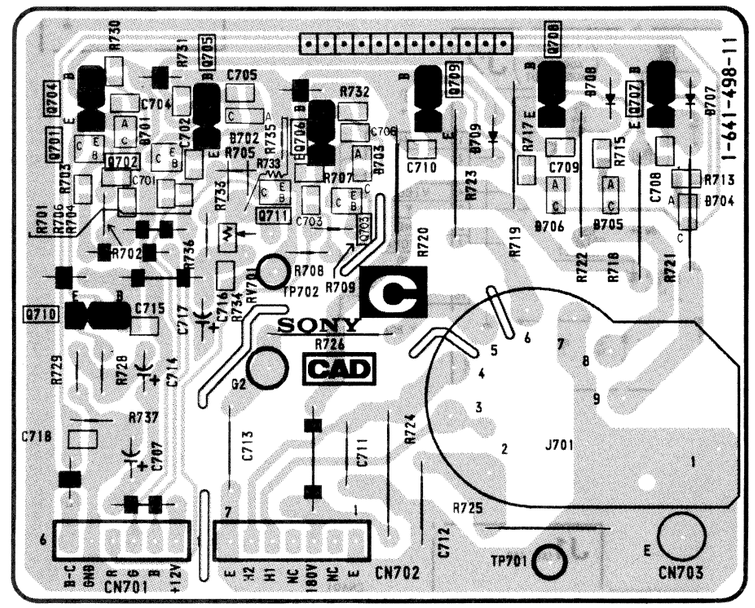
— J4 board —



C



— C board —

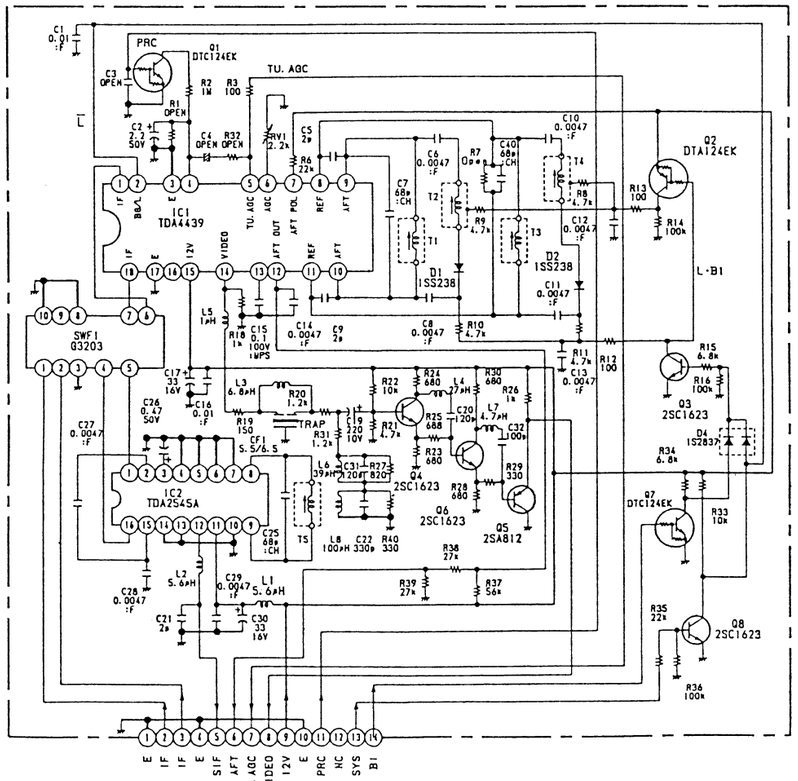


WAVEFORMS C BOARD

① 23.0 Vp-p (H)	② 90.0Vp-p (H)	③ 90.0Vp-p(H)
④ 90.0 Vp-p (H)		

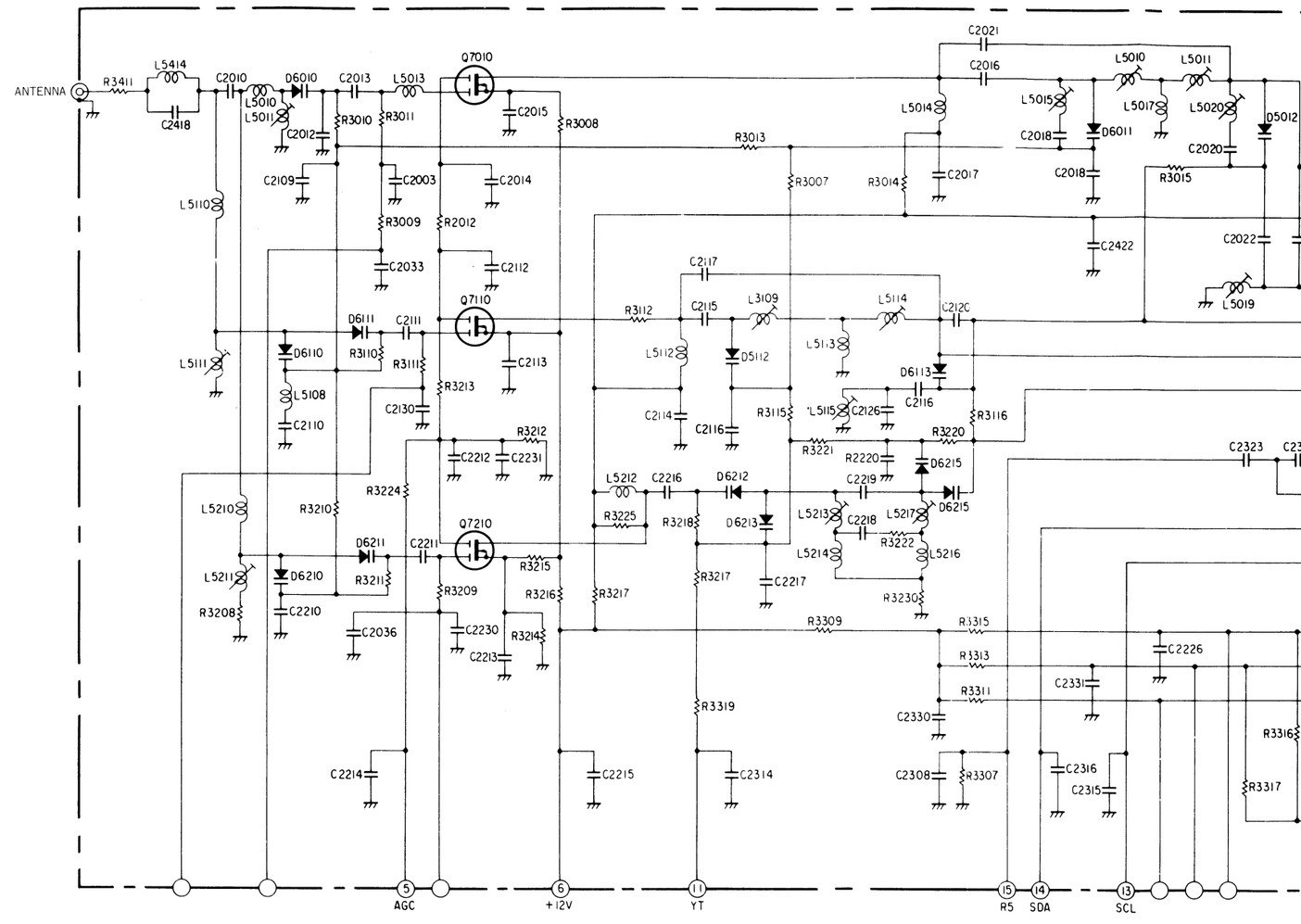
—A board—

VIF101 IFG-389FS



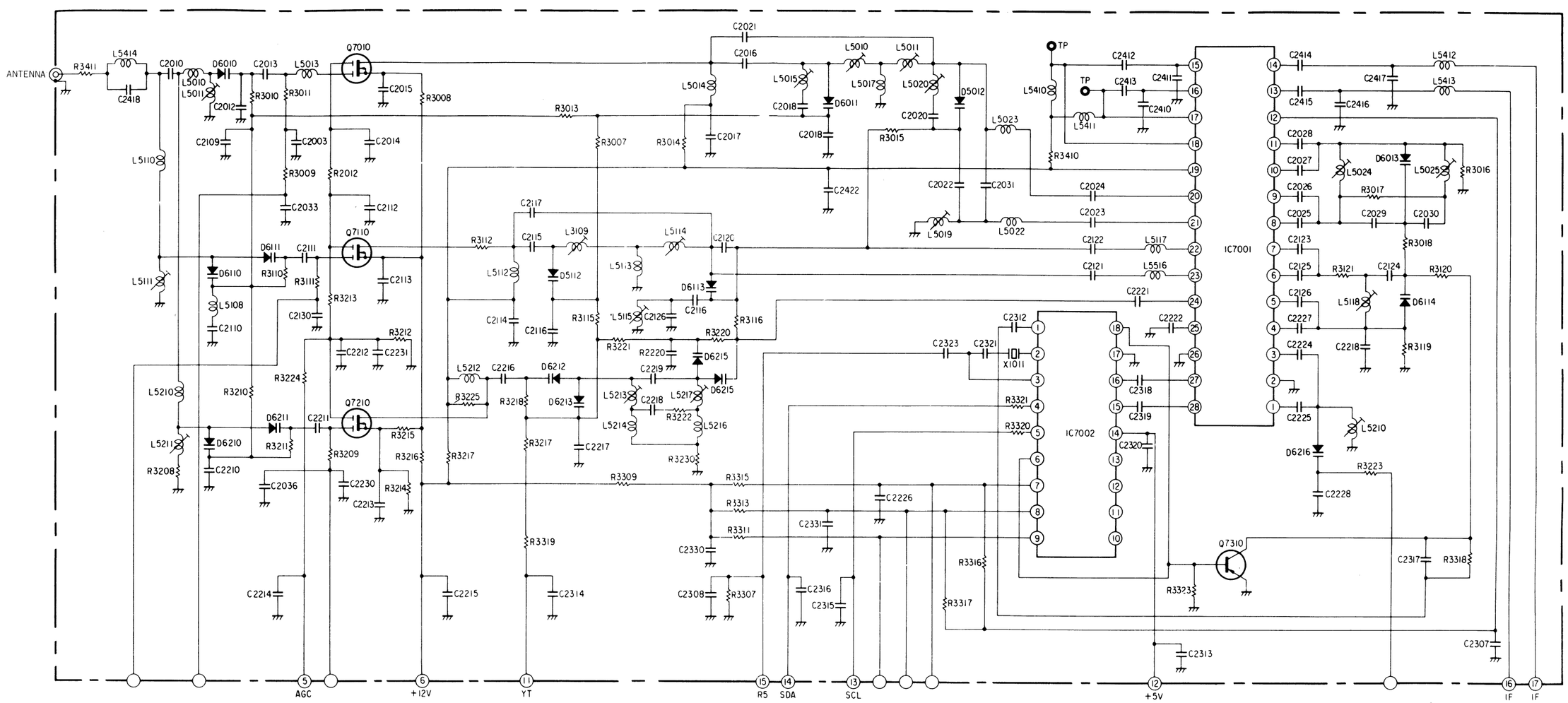
—A board—

TU101 UV816PLL



—A board—

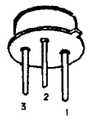
TU101 UV816PLL



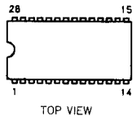
KV-M1100D
RM-818

5-4. SEMICONDUCTORS

BX-1393

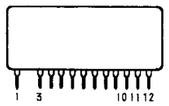


CXA1114P

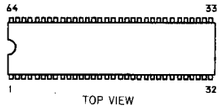


DM-45

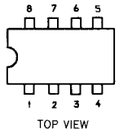
DM-46



M37201M6-A13SP

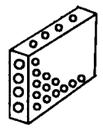


NVM3060
SDA2546
TBA129

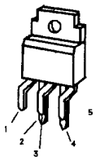


PQ05RR1

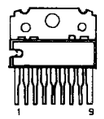
STK951-120B



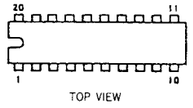
S1-3120CA



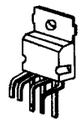
TDA1013B



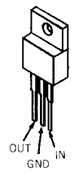
TDA2460-2



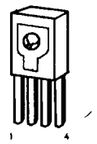
TDA8175



M5F78M12L
μPC24M12HF



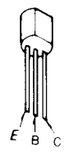
μPC2255H



BF199
BF959

DTA144EK
DTA144TK
DTC114TK
DTC144TK
2SA1162-G
2SC1623L6
2SC2712-YG

2SA1016KFG



2SA1091-O
2SC2551-RL

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2SA1175-HFE
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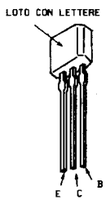

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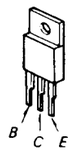

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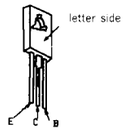

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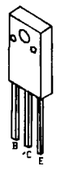

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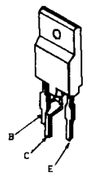
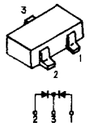
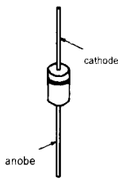


2SD2096-EF

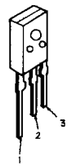
DAN202K
MA152WK
1S2837



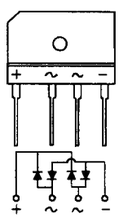
DINL20
DIN20R
DINS4
EQB01-35
RD16ESB3
RD20ESB2
RU-3AM



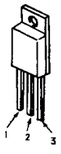
D10SC4M



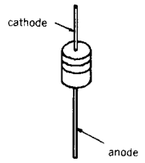
D4SB60L



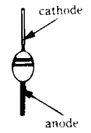
ESAC25-04C



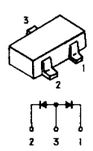
RD12ESB1
RD36ESB2
RD5.1ESB2
RD5.6ES-B
RD6.2ES-B2
RD7.5ESB3
1SS119
1SS168



RD12ESB
U05G



1S2836



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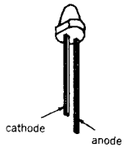


SECTION 6
EXPLODED VIEWS

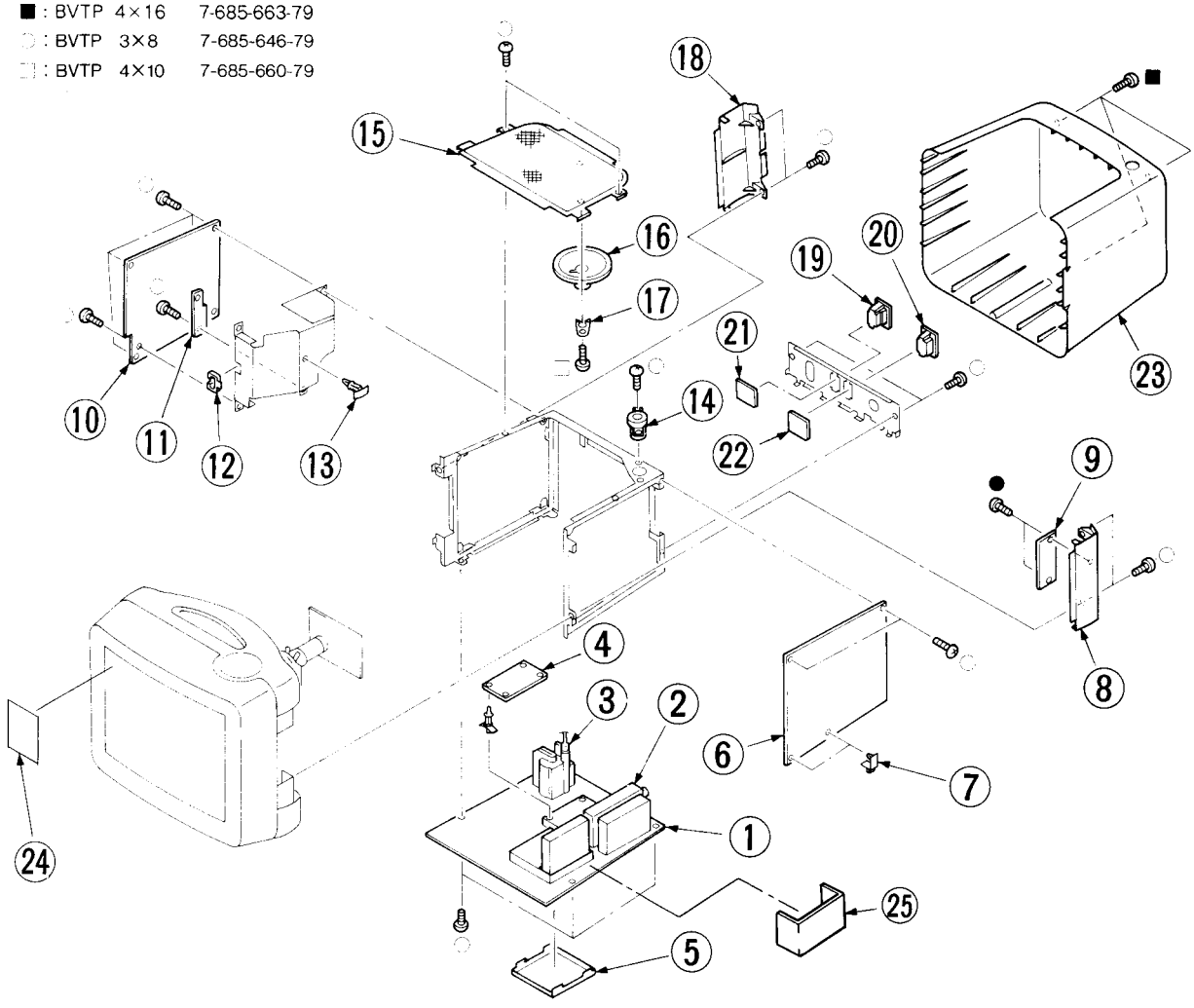
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CHASSIS

● : BVTP 3×12 7-685-648-79
■ : BVTP 4×16 7-685-663-79
○ : BVTP 3×8 7-685-646-79
□ : BVTP 4×10 7-685-660-79

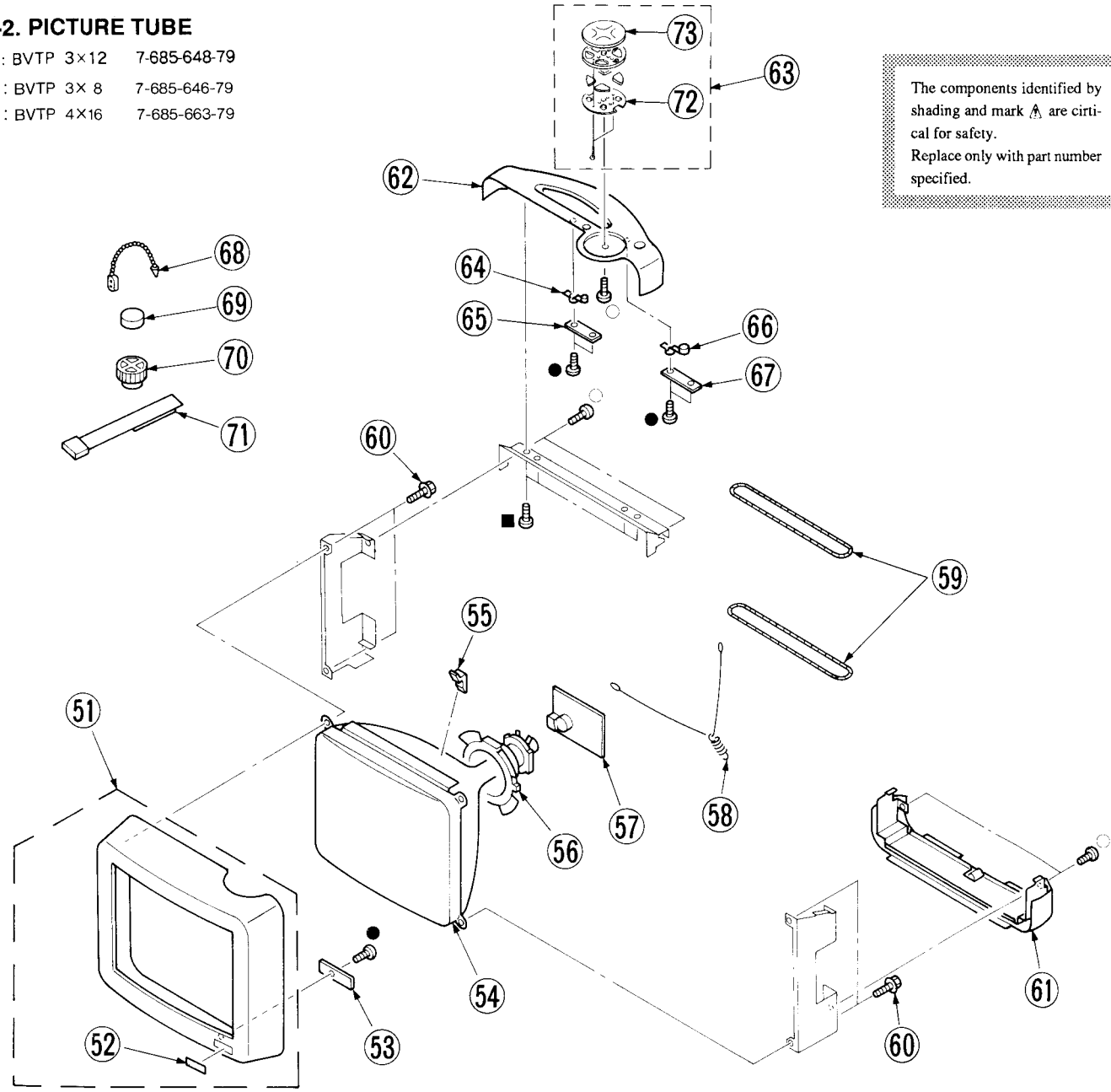


REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*A-1296-910-A	A BOARD, COMPLETE	
2	⚠1-465-301-11	TUNER, ET (UV-816(PLL))	
3	⚠1-439-476-11	TRANSFORMER ASSY, FLYBACK	
4	*1-641-506-12	J4 BOARD	
5	*4-394-974-01	CASE (BOTTOM LID), SHIELD	
6	*A-1394-338-A	Y BOARD, COMPLETE	
7	*3-701-832-00	HINGE, CIRCUIT BOARD	
8	4-035-436-01	PLATE (RIGHT), SIDE	
9	*1-641-503-11	J2 BOARD	
10	*A-1316-122-A	G BOARD, COMPLETE	11
11	*1-642-571-11	G1 BOARD	
12	*3-646-071-00	HOLDER, WIRE	
13	*3-704-198-11	SUPPORT, PC	
14	4-035-428-01	BRACKET, ANTENNA	
15	X-4030-349-1	PLATE ASSY, SP	
16	1-544-187-11	SPEAKER	
17	*4-338-106-00	HOLDER, SPEAKER	
18	4-035-440-01	PLATE (LEFT), SIDE	
19	1-561-530-00	CONNECTOR (DC POWER)	
20	⚠1-540-054-11	INLET, AC	
21	*1-641-505-11	J3 BOARD	
22	*1-641-502-11	J1 BOARD	
23	X-4030-223-1	COVER ASSY, REAR	
24	3-703-706-01	STICKER, SONY SYMBOL (25)	
25	4-036-059-01	SHEET, COPPER	

6-2. PICTURE TUBE

● : BVTP 3×12 7-685-648-79
○ : BVTP 3× 8 7-685-646-79
■ : BVTP 4×16 7-685-663-79

The components identified by shading and mark ⚠ are cirtical for safety.
Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4030-222-1	CABINET ASSY (WITH BEZEL ASSY)	52
52	4-035-423-01	WINDOW, ORNAMENTAL	
53	*1-641-499-11	H1 BOARD	
54	⚠8-735-821-05	PICTURE TUBE (A27KGC10X)	
55	3-704-495-01	SPACER, DY	
56	⚠1-451-354-11	DEFLECTION YOKE (Y11SLA)	
57	*A-1331-179-A	C BOARD, COMPLETE	
58	4-303-774-99	SPRING	
59	⚠1-426-590-11	COIL, DEMAGNETIZATION	
60	4-365-808-01	SCREW (5), TAPPING	
61	X-4030-224-1	PLATE ASSY, BOTTOM	
62	X-4030-225-1	PLATE ASSY, TOP	
63	1-466-678-11	SWITCH BLOCK	72,73
64	4-035-432-01	BUTTON (A), MULTI	
65	*1-641-501-11	H3 BOARD	
66	4-035-429-01	BUTTON (B), MULTI	
67	*1-641-500-11	H2 BOARD	
68	4-308-870-00	CLIP, LEAD WIRE	
69	1-452-512-11	MAGNET	
70	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ	
71	X-4308-815-0	PERMALLOY ASSY, CONVERGENCE	
72	*9-902-396-01	PW BOARD	
73	9-902-397-01	SHEET, RUBBER	

SECTION 7
ELECTRICAL PARTS LIST

A

NOTE :

The components identified by shading and mark ⚠ are cirtical for safety.
Replace only with part number specified.

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF: μF , PF: μμF

COILS
- MMH:mH , UH: μH

RESISTORS
- All resistors are in ohms
- F : nonflammable

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1296-910-A	A BOARD, COMPLETE				
		**********				
	*4-341-751-01	EYELET				
	*4-341-752-01	EYELET				
		<CAPACITOR>				
C101	1-126-233-11	ELECT	22MF	20%	50V	
C102	1-126-103-11	ELECT	470MF	20%	16V	
C103	1-136-165-00	FILM	0.1MF	5%	50V	
C104	1-136-165-00	FILM	0.1MF	5%	50V	
C105	1-126-103-11	ELECT	470MF	20%	16V	
C106	1-126-233-11	ELECT	22MF	20%	50V	
C107	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C108	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C109	1-124-910-11	ELECT	47MF	20%	50V	
C111	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C112	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C113	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C114	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C115	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C116	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C117	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C118	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C119	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C120	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C121	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C122	1-124-910-11	ELECT	47MF	20%	50V	
C123	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C124	1-126-233-11	ELECT	22MF	20%	50V	
C125	1-163-029-11	CERAMIC CHIP	0.0047MF		50V	
C126	1-124-910-11	ELECT	47MF	20%	50V	
C127	1-124-903-11	ELECT	1MF	20%	50V	
C128	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C129	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C130	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C131	1-124-910-11	ELECT	47MF	20%	50V	
C132	1-124-910-11	ELECT	47MF	20%	50V	
C133	1-136-161-00	FILM	0.047MF	5%	50V	
C134	1-136-153-00	FILM	0.01MF	5%	50V	
C135	1-136-153-00	FILM	0.01MF	5%	50V	
C136	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	
C137	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C301	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C302	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	
C303	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C304	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C305	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C306	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C307	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C308	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C309	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C310	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C311	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C312	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C313	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C314	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C315	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C316	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C317	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C318	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C319	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C320	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C321	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C322	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C323	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C324	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C325	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C326	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C327	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C328	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C329	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C330	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C331	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C332	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C333	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C334	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C335	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C336	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C337	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C338	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C339	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C340	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C341	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C342	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C343	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C344	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C345	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C346	1-124-120-11	ELECT	220MF	20%	16V	
C347	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C348	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C349	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C350	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C351	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C352	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C353	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C354	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C355	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C356	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C357	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C359	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C360	1-126-101-11	ELECT	100MF	20%	16V	

A

The components identified by shading and mark ⚠ are cirtical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C361	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C362	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C363	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C364	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C365	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C366	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C367	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C368	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C369	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C370	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C371	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C372	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C373	1-124-903-11	ELECT 1MF	20%	50V	
C379	1-124-911-11	ELECT 220MF	20%	50V	
C380	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C381	1-124-907-11	ELECT 10MF	20%	50V	
C382	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C383	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C384	1-126-101-11	ELECT 100MF	20%	16V	
C385	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C386	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C387	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C388	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C389	1-126-101-11	ELECT 100MF	20%	16V	
C390	1-126-101-11	ELECT 100MF	20%	16V	
C391	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C392	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C393	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C394	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C395	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V	
C396	1-163-006-11	CERAMIC CHIP 560PF	10%	50V	
C397	1-163-003-11	CERAMIC CHIP 330PF	10%	50V	
C801	1-124-922-11	ELECT 1000MF	20%	50V	
C802	1-136-165-00	FILM 0.1MF	5%	50V	
C803	1-124-911-11	ELECT 220MF	20%	50V	
C804	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C805	1-124-634-11	ELECT 1MF	20%	250V	
C807	1-124-925-11	ELECT 2.2MF	20%	50V	
C808	1-106-220-00	MYLAR 0.1MF	10%	100V	
C809	1-101-821-00	CERAMIC 0.0022MF		500V	
C810	1-162-115-00	CERAMIC 330PF	10%	2KV	
C813	1-124-927-11	ELECT 4.7MF	20%	50V	
C814	1-124-922-11	ELECT 1000MF	20%	50V	
C815	1-136-164-00	FILM 0.082MF	5%	50V	
C816	1-124-910-11	ELECT 47MF	20%	50V	
C817	1-126-101-11	ELECT 100MF	20%	16V	
C818	1-124-927-11	ELECT 4.7MF	20%	50V	
C819	1-106-367-00	MYLAR 0.01MF	10%	200V	
C821	1-124-912-11	ELECT 330MF	20%	50V	
C822	1-136-105-00	FILM 0.33MF	5%	200V	
C824	1-101-821-00	CERAMIC 0.0022MF		500V	
C827	⚠1-136-070-11	FILM 0.005MF	3%	2KV	
C830	1-102-030-00	CERAMIC 330PF	10%	500V	
C831	1-123-024-21	ELECT 33MF		160V	
C832	1-124-120-11	ELECT 220MF	20%	16V	
C833	1-123-939-00	ELECT 10MF	20%	200V	
C834	1-106-363-00	MYLAR 0.0068MF		200V	
C836	1-136-165-00	FILM 0.1MF	5%	50V	
C837	1-124-907-11	ELECT 10MF	20%	50V	
C838	1-102-228-00	CERAMIC 470PF	10%	500V	
C839	1-163-131-00	CERAMIC CHIP 390PF	5%	50V	
C841	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C842	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<FILTER>	
CD101	1-404-751-11	DISCRIMINATOR, CERAMIC	
CD102	1-404-684-11	DISCRIMINATOR, CERAMIC	
CF101	1-527-840-00	FILTER, CERAMIC	
CF102	1-567-569-11	FILTER, CERAMIC	
SWF101	1-404-711-11	SAWF	
SWF102	1-404-712-11	SAWF	
		<CONNECTOR>	
CN101	*1-564-509-11	PLUG, CONNECTOR 6P	
CN301	*1-564-511-11	PLUG, CONNECTOR 8P	
CN302	*1-564-510-11	PLUG, CONNECTOR 7P	
CN303	*1-564-508-11	PLUG, CONNECTOR 5P	
CN304	*1-564-507-11	PLUG, CONNECTOR 4P	
CN305	*1-564-506-11	PLUG, CONNECTOR 3P	
CN306	*1-564-515-11	PLUG, CONNECTOR 12P	
CN307	*1-564-509-11	PLUG, CONNECTOR 6P	
CN308	*1-564-510-11	PLUG, CONNECTOR 7P	
CN309	*1-564-505-11	PLUG, CONNECTOR 2P	
CN310	*1-564-508-11	PLUG, CONNECTOR 5P	
CN801	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
CN802	*1-564-510-11	PLUG, CONNECTOR 7P	
		<COMPOSITION CIRCUIT BLOCK>	
CP303	1-232-680-11	COMPOSITION CIRCUIT BLOCK	
CP304	1-232-680-11	COMPOSITION CIRCUIT BLOCK	
		<DIODE>	
D101	8-719-903-27	DIODE 1SS168	
D102	8-719-903-27	DIODE 1SS168	
D305	8-719-400-18	DIODE MA152WK	
D306	8-719-104-34	DIODE 1S2836	
D310	8-719-109-93	DIODE RD6.2ES-B2	
D311	8-719-400-18	DIODE MA152WK	
D312	8-719-400-18	DIODE MA152WK	
D313	8-719-110-04	DIODE RD7.5ES-B3	
D314	8-719-400-18	DIODE MA152WK	
D315	8-719-911-19	DIODE 1SS119	
D801	8-719-911-55	DIODE U05G	
D802	8-719-109-93	DIODE RD6.2ES-B2	
D807	8-719-300-33	DIODE RU-3AM	
D810	8-719-110-83	DIODE RD36ES-B2	
D811	8-719-300-33	DIODE RU-3AM	
D812	8-719-400-18	DIODE MA152WK	
D813	8-719-400-18	DIODE MA152WK	
D814	8-719-400-18	DIODE MA152WK	
		<IC>	
IC101	8-759-014-34	IC TDA2460-2	
IC102	8-759-003-90	IC TBA129	
IC301	8-749-922-99	IC STK951-120B	
IC302	8-759-047-35	IC M37201M6-A13SP	
IC303	8-759-748-56	IC SDA2546	
IC304	8-759-047-36	IC PQ05RR1	
	4-382-854-11	SCREW (M3X10), P, SW (+); IC304	
IC305	8-759-143-11	IC UPC24M12HF	
	4-382-854-11	SCREW (M3X10), P, SW (+); IC305	
IC306	8-759-047-17	IC NVM3060	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
IC801	8-759-047-73	IC TDA8175	
	4-382-854-11	SCREW (M3X10), P, SW (+); IC801	
		<COIL>	
L101	1-408-413-00	INDUCTOR 22UH	
L102	1-408-426-00	INDUCTOR 270UH	
L103	1-408-403-00	INDUCTOR 3.3UH	
L104	1-408-399-00	INDUCTOR 1.5UH	
L105	1-408-408-00	INDUCTOR 8.2UH	
L106	1-408-410-00	INDUCTOR 12UH	
L301	1-408-413-00	INDUCTOR 22UH	
L302	1-408-417-00	INDUCTOR 47UH	
L303	1-543-813-21	FILTER, EMI	
L304	1-543-813-21	FILTER, EMI	
L305	1-543-813-21	FILTER, EMI	
L306	1-543-813-21	FILTER, EMI	
L307	1-543-813-21	FILTER, EMI	
L308	1-412-520-21	INDUCTOR 3.9UH	
L309	1-412-533-21	INDUCTOR 47UH	
L801	1-460-026-11	COIL, HORIZONTAL LINEARITY	
L803	1-407-365-00	COIL,CHOKE	
L804	1-412-530-11	INDUCTOR 27UH	
L805	1-407-500-00	INDUCTOR 4.7MMH	
		<TRANSISTOR>	
Q101	8-729-903-30	TRANSISTOR DTC144TK	
Q102	8-729-903-29	TRANSISTOR DTA144TK	
Q103	8-729-901-59	TRANSISTOR BF199	
Q104	8-729-000-12	TRANSISTOR BF959	
Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q106	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q107	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q108	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q109	8-729-903-30	TRANSISTOR DTC144TK	
Q110	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q111	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q306	8-729-903-30	TRANSISTOR DTC144TK	
Q307	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q308	8-729-901-06	TRANSISTOR DTA144EK	
Q309	8-729-903-30	TRANSISTOR DTC144TK	
Q310	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q311	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q314	8-729-902-99	TRANSISTOR DTC114TK	
Q315	8-729-902-99	TRANSISTOR DTC114TK	
Q316	8-729-902-99	TRANSISTOR DTC114TK	
Q317	8-729-902-99	TRANSISTOR DTC114TK	
Q804	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q805	8-729-820-50	TRANSISTOR 2SA1016KFG	
Q806	8-729-231-95	TRANSISTOR 2SD2089-LBSONY	
	4-382-854-11	SCREW (M3X10), P, SW (+); Q806	
Q807	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q808	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q809	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q810	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q811	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q813	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q814	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q815	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q816	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q1031	8-729-902-99	TRANSISTOR DTC114TK	
Q1032	8-729-902-99	TRANSISTOR DTC114TK	

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
JR1	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR2	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR3	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR4	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR5	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR6	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR7	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR11	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR12	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR16	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR17	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR18	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR19	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR20	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR23	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR24	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR25	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR26	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR27	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR28	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR31	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR32	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR37	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR38	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR39	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR40	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR41	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR42	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR43	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR44	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR45	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR46	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR47	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR48	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR49	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR50	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR51	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR52	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR53	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR54	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR55	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR56	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR57	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR59	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR60	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR61	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR62	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR63	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR66	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR67	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR70	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR71	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR72	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR73	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR74	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR75	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR76	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR77	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR78	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR79	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR80	1-216-295-00	METAL GLAZE	0	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
JR81	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR82	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR83	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR85	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR86	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR87	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR88	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR89	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR90	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR92	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR93	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR94	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR95	1-216-296-00	METAL GLAZE	0	5%	1/8W	
R101	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R102	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R103	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R104	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R105	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R106	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R108	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R109	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R110	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R111	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R112	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R113	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R114	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R115	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R116	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R117	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R118	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R119	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R120	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R121	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R122	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R123	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R124	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R125	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R126	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R127	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R128	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R129	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R132	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R133	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R134	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R135	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R136	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R137	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R138	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R139	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R140	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R141	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R142	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R143	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R144	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R145	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R301	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R302	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R303	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R304	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R305	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R306	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R307	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R308	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R309	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R310	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R311	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R312	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R313	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R314	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R315	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R317	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R318	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R319	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R320	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R321	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R322	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R323	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R324	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R325	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R326	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R327	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R328	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R329	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R330	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R331	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R332	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R333	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R334	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R335	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R336	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R337	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R338	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R339	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R340	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R341	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R342	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R343	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R344	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R345	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R346	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R347	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R348	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R349	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R350	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R351	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R352	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R353	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R354	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R355	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R356	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R357	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R358	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R359	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R360	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R361	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R362	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R363	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R364	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R366	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R367	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R368	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R371	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R372	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R377	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R378	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R379	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R380	1-216-295-00	METAL GLAZE	0	5%	1/10W	

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The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R381	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R382	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R383	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R384	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R388	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R389	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R390	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R391	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R392	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R393	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R394	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R395	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R396	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R397	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R398	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R399	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R400	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R408	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R409	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R410	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R411	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R412	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R413	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R414	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R415	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R416	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R417	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R418	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R419	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R420	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R421	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R422	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R423	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R424	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R426	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R427	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R430	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R431	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R432	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R433	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R434	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R435	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R436	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R437	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R438	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R439	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R440	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R441	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R442	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R443	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R444	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R801	1-249-449-11	CARBON	1.5	5%	1/4W	F
R802	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R805	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R806	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R808	1-249-451-11	CARBON	2.2	5%	1/4W	F
R809	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R811	1-215-889-00	METAL OXIDE	330	5%	2W	F
R812	1-249-459-11	CARBON	12K	5%	1/4W	F
R813	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R817	1-216-373-11	METAL OXIDE	2.2	5%	2W	F
R819	1-216-442-00	METAL OXIDE	39K	5%	1W	F
R820	1-216-437-91	METAL OXIDE	5.6K	5%	1W	F
R824	1-247-716-11	CARBON	1.8K	5%	1/4W	F

REF.NO.	PART NO.	DESCRIPTION				REMARK
R825	1-249-449-11	CARBON	1.5	5%	1/4W	F
R828	1-249-443-11	CARBON	0.47	5%	1/4W	F
R831	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R833	1-215-897-11	METAL OXIDE	6.8K	5%	2W	F
R834	1-215-901-00	METAL OXIDE	33K	5%	2W	F
R835	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R836	1-216-352-11	METAL OXIDE	1.8	5%	1W	F
R837	1-247-699-11	CARBON	82	5%	1/4W	F
R838	1-249-448-11	CARBON	1.2	5%	1/4W	F
R839	1-215-882-00	METAL OXIDE	22	5%	2W	F
R840	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R841	1-215-449-00	METAL	15K	1%	1/4W	
R842	1-215-455-00	METAL	27K	1%	1/4W	
R843	1-216-430-11	METAL OXIDE	390	5%	1W	F
R844	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R845	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R846	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R847	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R848	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R849	1-215-888-00	METAL OXIDE	220	5%	2W	F
R850	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R851	1-249-400-11	CARBON	39	5%	1/4W	
R852	1-215-473-00	METAL	150K	1%	1/4W	
R853	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R854	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R855	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R857	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R858	1-249-437-11	CARBON	47K	5%	1/4W	
R859	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R860	1-216-049-00	METAL GLAZE	1K	5%	1/10W	

<SWITCH>

SW301	1-571-532-21	SWITCH, TACTIL

<TRANSFORMER>

T101	1-404-806-11	COIL
T801	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE
T802	⚠1-439-476-11	TRANSFORMER ASSY, FLYBACK
T803	1-424-646-11	TRANSFORMER, FERRITE (H.PCT)

<TUNER>

TU101	⚠1-465-301-11	TUNER, ET (UV-816(PLL))

<IF BLOCK>

VIF101	1-464-962-11	IF BLOCK (IFG-389FS)

<CRYSTAL>

X301	1-577-071-11	VIBRATOR, CERAMIC

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	*A-1316-122-A	G BOARD, COMPLETE
		**********
	*4-341-751-01	EYELET (CN609)
	*4-341-752-01	EYELET (EY601,EY602)
	4-382-854-11	SCREW (M3X10), P, SW (+)

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<CAPACITOR>				
C602	1-161-742-00	CERAMIC	0.0022MF	20%	400V	
C603	1-162-130-11	CERAMIC	180PF	10%	2KV	
C612	1-128-125-91	ELECT	180MF	20%	16V	
C613	1-126-516-11	ELECT	120MF	20%	16V	
C614	1-124-786-11	ELECT	22MF	20%	35V	
C615	1-126-777-51	ELECT	2200MF	20%	35V	
C616	1-136-153-00	FILM	0.01MF	5%	50V	
C617	1-136-153-00	FILM	0.01MF	5%	50V	
C618	1-136-153-00	FILM	0.01MF	5%	50V	
C619	1-136-153-00	FILM	0.01MF	5%	50V	
C620	1-137-189-11	FILM	0.18MF	5%	50V	
C621	1-137-189-11	FILM	0.18MF	5%	50V	
C622	1-137-189-11	FILM	0.18MF	5%	50V	
C623	1-137-189-11	FILM	0.18MF	5%	50V	
C624	1-136-153-00	FILM	0.01MF	5%	50V	
C625	1-136-153-00	FILM	0.01MF	5%	50V	
C626	1-137-572-21	FILM	0.056MF	5%	400V	
C627	1-137-552-11	FILM	0.23MF	5%	42V	
C628	1-124-126-00	ELECT	47MF	20%	25V	
C629	1-126-516-11	ELECT	120MF	20%	16V	
C630	1-128-102-11	ELECT	1200MF	20%	16V	
C631	1-126-376-11	ELECT	470MF	20%	25V	
C632	1-126-600-11	ELECT	100MF	20%	160V	
C633	1-124-122-11	ELECT	100MF	20%	25V	
C634	1-101-821-00	CERAMIC	0.0022MF		500V	
C635	1-136-161-00	FILM	0.047MF	5%	50V	
C636	1-102-038-00	CERAMIC	0.001MF		500V	
C637	1-126-516-11	ELECT	120MF	20%	16V	
C638	1-123-379-00	ELECT	0.47MF	20%	50V	
C639	1-136-165-00	FILM	0.1MF	5%	50V	
C651	1-136-153-00	FILM	0.01MF	5%	50V	
C661	1-164-644-11	CERAMIC	330PF	10%	500V	
C662	1-136-129-00	FILM	0.3MF	5%	400V	
C663	1-162-130-11	CERAMIC	180PF	10%	2KV	
C664	1-162-130-11	CERAMIC	180PF	10%	2KV	
C665	1-136-170-00	FILM	0.27MF	5%	50V	
C667	1-136-170-00	FILM	0.27MF	5%	50V	
C668	1-137-573-31	FILM	0.0047MF	5%	630V	
C669	1-136-067-00	FILM	0.0036MF	3%	2KV	
C670	1-128-125-91	ELECT	180MF	20%	16V	
		<CONNECTOR>				
CN604	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
CN605	*1-580-838-11	PIN, CONNECTOR (PC BOARD) 4P				
CN606	*1-564-506-11	PLUG, CONNECTOR 3P				
CN607	*1-564-511-11	PLUG, CONNECTOR 8P				
CN608	*1-564-505-11	PLUG, CONNECTOR 2P				
CN610	*1-564-507-11	PLUG, CONNECTOR 4P				
CN611	*1-564-321-00	PIN, CONNECTOR 2P				
		<DIODE>				
D602	8-719-510-48	DIODE D1N20R				
D603	8-719-510-48	DIODE D1N20R				
D604	8-719-510-48	DIODE D1N20R				
D615	8-719-911-19	DIODE 1SS119				
D616	8-719-510-48	DIODE D1N20R				
D617	8-719-510-48	DIODE D1N20R				
D618	8-719-510-48	DIODE D1N20R				
D619	8-719-510-48	DIODE D1N20R				
D620	8-719-510-48	DIODE D1N20R				
D621	8-719-510-48	DIODE D1N20R				
D622	8-719-510-48	DIODE D1N20R				
D623	8-719-510-48	DIODE D1N20R				
D628	8-719-510-26	DIODE D1NL20				
D629	8-719-110-46	DIODE RD16ES-B3				
D651	8-719-510-26	DIODE D1NL20				
D652	8-719-510-26	DIODE D1NL20				
D653	8-719-510-26	DIODE D1NL20				
D654	8-719-510-26	DIODE D1NL20				
D655	8-719-109-88	DIODE RD5.6ES-B1				
D661	8-719-510-13	DIODE D10SC4MR				
	4-382-854-11	SCREW (M3X10), P, SW (+); D661				
D662	8-719-510-12	DIODE D10SC4M				
D665	8-719-025-11	DIODE D8LC20UR				
D666	8-719-025-10	DIODE D8LC20U				
D671	8-719-110-46	DIODE RD16ES-B3				
D672	8-719-510-26	DIODE D1NL20				
D673	8-719-911-19	DIODE 1SS119				
D674	8-719-510-48	DIODE D1N20R				
		<FERRITE BEAD>				
FB601	1-412-911-11	INDUCTOR, FERRITE BEAD				
FB602	1-412-911-11	INDUCTOR, FERRITE BEAD				
FB603	1-412-911-11	INDUCTOR, FERRITE BEAD				
FB604	1-412-911-11	INDUCTOR, FERRITE BEAD				
FB605	1-412-911-11	INDUCTOR, FERRITE BEAD				
FB606	1-412-911-11	INDUCTOR, FERRITE BEAD				
FB607	1-412-911-11	INDUCTOR, FERRITE BEAD				
FB608	1-412-911-11	INDUCTOR, FERRITE BEAD				
FB609	1-410-396-41	FERRITE BEAD INDUCTOR				
FB610	1-410-396-41	FERRITE BEAD INDUCTOR				
FB611	1-543-194-00	CORE, BEAD				
FB612	1-543-194-00	CORE, BEAD				
		<IC>				
IC601	8-759-604-39	IC M5F78M12L				
	4-382-854-01	SCREW (M3X8), P, SW (+); IC601				
IC602	8-759-047-18	IC UPC2255H				
IC603	8-749-921-99	IC SI-3120CA				
	4-382-854-01	SCREW (M3X8), P, SW (+); IC603				
IC604	1-809-703-11	MODULE, POWER DM-46				
IC605	1-809-704-11	MODULE, POWER DM-45				
		<COIL>				
L602	1-412-533-21	INDUCTOR	47UH			
		<TRANSISTOR>				
Q601	8-729-010-85	TRANSISTOR 2SC4833				
Q602	8-729-010-85	TRANSISTOR 2SC4833				
Q603	8-729-011-74	TRANSISTOR 2SC4876				
Q604	8-729-011-74	TRANSISTOR 2SC4876				
Q605	8-729-011-74	TRANSISTOR 2SC4876				
Q606	8-729-011-74	TRANSISTOR 2SC4876				
Q607	8-729-920-92	TRANSISTOR 2SD2096-EF				
Q608	8-729-920-92	TRANSISTOR 2SD2096-EF				
Q610	8-729-122-12	TRANSISTOR 2SA1221-L				
Q611	8-729-920-92	TRANSISTOR 2SD2096-EF				
Q671	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q672	8-729-119-76	TRANSISTOR 2SA1175-HFE				

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The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R603	1-215-859-00	METAL OXIDE	22	5%	1W	F
R604	1-215-859-00	METAL OXIDE	22	5%	1W	F
R605	1-202-844-00	SOLID	330K	10%	1/2W	
R606	1-202-844-00	SOLID	330K	10%	1/2W	
R607	1-215-859-00	METAL OXIDE	22	5%	1W	F
R608	1-216-341-11	METAL OXIDE	0.22	5%	1W	F
R609	1-216-341-11	METAL OXIDE	0.22	5%	1W	F
R610	1-249-429-11	CARBON	10K	5%	1/4W	
R611	1-249-429-11	CARBON	10K	5%	1/4W	
R613	1-216-341-11	METAL OXIDE	0.22	5%	1W	F
R614	1-216-341-11	METAL OXIDE	0.22	5%	1W	F
R615	1-216-341-11	METAL OXIDE	0.22	5%	1W	F
R616	1-216-341-11	METAL OXIDE	0.22	5%	1W	F
R617	1-216-354-11	METAL OXIDE	2.7	5%	1W	F
R618	1-216-347-11	METAL OXIDE	0.68	5%	1W	F
R619	1-216-354-11	METAL OXIDE	2.7	5%	1W	F
R620	1-216-354-11	METAL OXIDE	2.7	5%	1W	F
R626	1-216-422-11	METAL OXIDE	18	5%	1W	F
R627	1-249-425-11	CARBON	4.7K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-249-413-11	CARBON	470	5%	1/4W	F
R630	1-249-405-11	CARBON	100	5%	1/4W	F
R631	1-249-405-11	CARBON	100	5%	1/4W	F
R633	1-218-268-51	METAL	0.47	5%	1/2W	
R634	1-218-268-51	METAL	0.47	5%	1/2W	
R635	1-249-394-11	CARBON	12	5%	1/4W	F
R636	1-249-405-11	CARBON	100	5%	1/4W	F
R637	1-216-422-11	METAL OXIDE	18	5%	1W	F
R638	1-249-377-11	CARBON	0.47	5%	1/4W	F
R639	1-249-422-11	CARBON	2.7K	5%	1/4W	
R651	1-249-396-11	CARBON	18	5%	1/4W	F
R652	1-249-421-11	CARBON	2.2K	5%	1/4W	
R653	1-249-418-11	CARBON	1.2K	5%	1/4W	
R661	1-215-857-11	METAL OXIDE	10	5%	1W	F
R671	1-249-424-11	CARBON	3.9K	5%	1/4W	
R672	1-249-420-11	CARBON	1.8K	5%	1/4W	
R673	1-249-418-11	CARBON	1.2K	5%	1/4W	
R674	1-249-421-11	CARBON	2.2K	5%	1/4W	
R675	1-249-424-11	CARBON	3.9K	5%	1/4W	
R676	1-249-421-11	CARBON	2.2K	5%	1/4W	
R677	1-249-429-11	CARBON	10K	5%	1/4W	
R678	1-249-429-11	CARBON	10K	5%	1/4W	
R679	1-249-424-11	CARBON	3.9K	5%	1/4W	
R680	1-249-421-11	CARBON	2.2K	5%	1/4W	
R681	1-217-418-00	FUSIBLE	0.47	10%	1/2W	F
R682	1-249-399-11	CARBON	33	5%	1/4W	F
		<RELAY>				
RY602	⚠1-515-888-11	RELAY				
		<TRANSFORMER>				
T603	⚠1-424-647-11	TRANSFORMER, FERRITE (SBT-1B)				
T604	⚠1-450-862-11	TRANSFORMER, CONVERTER(PRT1-B)				
T605	⚠1-437-213-11	TRANSFORMER, CONVERTER DRIVE				
T606	⚠1-450-861-11	TRANSFORMER, CONVERTER DRIVE				
		<VARISTOR>				
VDR601	⚠1-809-679-11	VARISTOR				
VDR602	⚠1-809-678-11	VARISTOR				

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*1-642-571-11	G1 BOARD ********				
	*4-341-751-01	EYELET (EY690,EY691)				
		<CONNECTOR>				
CN612	*1-564-517-11	PLUG, CONNECTOR 2P				
		<DIODE>				
D691	8-719-911-19	DIODE 1SS119				
		<RELAY>				
RY691	⚠1-515-788-12	RELAY, POWER				
	*A-1331-179-A	C BOARD, COMPLETE **********				
		<CAPACITOR>				
C701	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C702	1-163-134-00	CERAMIC CHIP	510PF	5%	50V	
C703	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C704	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C705	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C706	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C707	1-124-477-11	ELECT	47MF	20%	16V	
C708	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C709	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C710	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C711	1-162-116-00	CERAMIC	680PF	10%	2KV	
C712	1-102-050-00	CERAMIC	0.01MF		500V	
C713	1-162-114-00	CERAMIC	0.0047MF		2KV	
C714	1-124-477-11	ELECT	47MF	20%	16V	
C715	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C716	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C717	1-126-233-11	ELECT	22MF	20%	50V	
C718	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
		<CONNECTOR>				
CN701	*1-564-509-11	PLUG, CONNECTOR 6P				
CN702	*1-564-510-11	PLUG, CONNECTOR 7P				
		<DIODE>				
D701	8-719-400-18	DIODE MA152WK				
D702	8-719-400-18	DIODE MA152WK				
D703	8-719-400-18	DIODE MA152WK				
D704	8-719-400-18	DIODE MA152WK				
D705	8-719-400-18	DIODE MA152WK				
D706	8-719-400-18	DIODE MA152WK				
D707	8-719-911-19	DIODE 1SS119				
D708	8-719-911-19	DIODE 1SS119				
D709	8-719-911-19	DIODE 1SS119				
		<JACK>				

The components identified by shading and mark ⚠ are cirtical for safety.
Replace only with part number specified.

C H1 H2 H3 J1 J3 J4

REF.NO.	PART NO.	DESCRIPTION				REMARK
J701	1-526-958-21	SOCKET, PICTURE TUBE				
		<TRANSISTOR>				
Q701	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q702	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q703	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q704	8-729-326-11	TRANSISTOR 2SC2611				
Q705	8-729-326-11	TRANSISTOR 2SC2611				
Q706	8-729-326-11	TRANSISTOR 2SC2611				
Q707	8-729-200-17	TRANSISTOR 2SA1091-O				
Q708	8-729-200-17	TRANSISTOR 2SA1091-O				
Q709	8-729-200-17	TRANSISTOR 2SA1091-O				
Q710	8-729-209-03	TRANSISTOR 2SC2551-RO				
Q711	8-729-230-46	TRANSISTOR 2SA1162-YG				
		<RESISTOR>				
R701	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R702	1-249-412-11	CARBON	390	5%	1/4W	
R703	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R704	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R705	1-249-412-11	CARBON	390	5%	1/4W	
R706	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R707	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R708	1-249-412-11	CARBON	390	5%	1/4W	
R709	1-249-417-11	CARBON	1K	5%	1/4W	
R713	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R715	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R717	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R718	1-216-463-00	METAL OXIDE	12K	5%	2W	F
R719	1-216-463-00	METAL OXIDE	12K	5%	2W	F
R720	1-216-463-00	METAL OXIDE	12K	5%	2W	F
R721	1-202-824-00	SOLID	3.3K	10%	1/2W	
R722	1-202-824-00	SOLID	3.3K	10%	1/2W	
R723	1-202-824-00	SOLID	3.3K	10%	1/2W	
R724	1-202-842-11	SOLID	220K	10%	1/2W	
R725	1-202-719-00	SOLID	1M	10%	1/2W	
R726	1-202-838-00	SOLID	100K	10%	1/2W	
R728	1-249-415-11	CARBON	680	5%	1/4W	
R729	1-249-433-11	CARBON	22K	5%	1/4W	
R730	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R731	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R732	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R733	1-249-423-11	CARBON	3.3K	5%	1/4W	
R734	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R735	1-249-417-11	CARBON	1K	5%	1/4W	
R736	1-249-389-11	CARBON	4.7	5%	1/4W	
R737	1-249-438-11	CARBON	56K	5%	1/4W	

****

*1-641-499-11 H1 BOARD
****

<CONNECTOR>

CN401 *1-564-519-11 PLUG, CONNECTOR 4P

<COMPOSITION CIRCUIT BLOCK>

CP401 1-232-680-11 COMPOSITION CIRCUIT BLOCK

<DIODE>

D401 8-719-907-87 DIODE PR5638S
4-035-418-01 HOLDER, LED; D401

<IC>

IC401 8-749-900-36 IC BX-1393

<RESISTOR>

R401	1-216-039-00	METAL GLAZE	390	5%	1/10W
R402	1-216-033-00	METAL GLAZE	220	5%	1/10W

****

*1-641-500-11 H2 BOARD
****

<CONNECTOR>

CN402 *1-564-517-11 PLUG, CONNECTOR 2P

<SWITCH>

SW401 ⚠ 1-554-937-21 SWITCH, KEY BOARD (POWER)

****

*1-641-501-11 H3 BOARD
****

<CONNECTOR>

CN403 *1-564-518-11 PLUG, CONNECTOR 3P

<SWITCH>

SW402 1-554-937-11 SWITCH, KEY BOARD

****

*1-641-502-11 J1 BOARD
****

****

*1-641-505-11 J3 BOARD
****

****

*1-641-506-12 J4 BOARD
****

<CAPACITOR>

C501	1-136-165-00	FILM	0.1MF	5%	50V
C502	1-136-165-00	FILM	0.1MF	5%	50V

<CONNECTOR>

CN502 *1-580-838-11 PIN, CONNECTOR (PC BOARD) 4P

<DIODE>

D501 8-719-912-51 DIODE ESAC25-04C

J4 J2 Y

The components identified by shading and mark ⚠ are cirtical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D502	8-719-912-51	DIODE ESAC25-04C	
D503	8-719-931-35	DIODE EQB01-35	
		<FUSE>	
F501	⚠1-532-279-11	FUSE, TIME-LAG 0.5A/250V	
	1-533-223-11	CLIP, FUSE; F501	
		<COIL>	
L501	1-424-648-11	TRANSFORMER, LINE FILTER (LFT)	
		<TRANSISTOR>	
Q501	8-729-206-05	TRANSISTOR 2SA1329-O	
		<RESISTOR>	
R501	1-249-427-11	CARBON 6.8K 5% 1/4W	
R502	1-249-409-11	CARBON 220 5% 1/4W	
R503	1-216-359-00	METAL OXIDE 6.8 5% 1W F	
R504	1-216-359-00	METAL OXIDE 6.8 5% 1W F	
**********			
	*1-641-503-11	J2 BOARD	
		********	
		<CAPACITOR>	
C510	1-124-477-11	ELECT 47MF 20% 16V	
C511	1-124-477-11	ELECT 47MF 20% 16V	
C512	1-124-477-11	ELECT 47MF 20% 16V	
C513	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C514	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
		<CONNECTOR>	
CN501	*1-564-525-11	PLUG, CONNECTOR 10P	
		<DIODE>	
D510	8-719-110-30	DIODE RD12ES-B1	
D511	8-719-110-30	DIODE RD12ES-B1	
D512	8-719-110-30	DIODE RD12ES-B1	
D513	8-719-110-30	DIODE RD12ES-B1	
		<JACK>	
J510	1-562-837-21	JACK	
J511	1-565-666-12	TERMINAL, S 4P	
J512	1-563-500-21	JACK BLOCK, PIN (L TYPE) 2P	
		<COIL>	
L510	1-408-397-00	INDUCTOR 1UH	
L511	1-408-409-00	INDUCTOR 10UH	
L512	1-408-409-00	INDUCTOR 10UH	
		<RESISTOR>	
R510	1-247-741-11	CARBON 150 5% 1/2W	
R511	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R514	1-216-172-00	METAL GLAZE 82 5% 1/8W	
R515	1-249-404-00	CARBON 82 5% 1/4W	
R516	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R517	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R518	1-216-172-00	METAL GLAZE 82 5% 1/8W	
**********			
	*A-1394-338-A	Y BOARD, COMPLETE	
		**********	
	*4-341-751-01	EYELET (EY201~EY203,EY601,EY602,EY606, EY607,EY610,EY611,EY613,EY614,EY617~ EY620,EY625~EY628,EY631,EY636)	
	*4-341-752-01	EYELET (EY615,EY616,EY629,EY630,EY632~ EY635)	
		<CAPACITOR>	
C201	1-124-557-11	ELECT 1000MF 20% 25V	
C202	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C203	1-124-557-11	ELECT 1000MF 20% 25V	
C204	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C205	1-124-477-11	ELECT 47MF 20% 16V	
C206	1-124-477-11	ELECT 47MF 20% 16V	
C208	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C209	1-124-234-00	ELECT 22MF 20% 16V	
C210	1-136-165-00	FILM 0.1MF 5% 50V	
C211	1-163-141-00	CERAMIC CHIP 0.001MF 5% 50V	
C212	1-136-165-00	FILM 0.1MF 5% 50V	
C213	1-124-903-11	ELECT 1MF 20% 50V	
C214	1-102-121-00	CERAMIC 0.0022MF 10% 50V	
C215	1-130-491-00	MYLAR 0.047MF 5% 50V	
C216	1-136-165-00	FILM 0.1MF 5% 50V	
C217	1-102-114-00	CERAMIC 470PF 10% 50V	
C218	1-102-114-00	CERAMIC 470PF 10% 50V	
C219	1-102-114-00	CERAMIC 470PF 10% 50V	
C220	1-124-119-00	ELECT 330MF 20% 16V	
C221	1-124-477-11	ELECT 47MF 20% 16V	
C222	1-126-160-11	ELECT 1MF 20% 50V	
C223	1-126-163-11	ELECT 4.7MF 20% 25V	
C224	1-124-477-11	ELECT 47MF 20% 16V	
C225	1-126-101-11	ELECT 100MF 20% 16V	
C227	1-126-233-11	ELECT 22MF 20% 50V	
C228	1-124-479-11	ELECT 330MF 20% 25V	
C229	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C230	1-126-103-11	ELECT 470MF 20% 16V	
C231	1-101-006-00	CERAMIC 0.047MF 50V	
C232	1-101-006-00	CERAMIC 0.047MF 50V	
C233	1-101-006-00	CERAMIC 0.047MF 50V	
C234	1-124-477-11	ELECT 47MF 20% 16V	
C235	1-124-589-11	ELECT 47MF 20% 16V	
C601	⚠1-136-360-51	FILM 0.22MF 20% 250V	
C604	⚠1-164-246-11	CERAMIC 0.0022MF 20% 400V	
C606	⚠1-136-360-51	FILM 0.22MF 20% 250V	
C607	⚠1-161-964-61	CERAMIC 0.0047MF 250V	
C608	⚠1-161-964-61	CERAMIC 0.0047MF 250V	
C609	⚠1-162-578-51	CERAMIC 0.0047MF 20% 400V	
C610	⚠1-125-497-11	ELECT(BLOCK) 100MF 20% 400V	
C611	⚠1-161-964-61	CERAMIC 0.0047MF 250V	
		<CONNECTOR>	
CN10	1-561-534-00	SOCKET 21P	
CN201	*1-564-515-11	PLUG, CONNECTOR 12P	
CN202	*1-564-509-11	PLUG, CONNECTOR 6P	
CN203	*1-564-510-11	PLUG, CONNECTOR 7P	

Y

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN204	*1-564-513-11	PLUG, CONNECTOR 10P	
CN205	*1-564-505-11	PLUG, CONNECTOR 2P	
CN206	*1-564-506-11	PLUG, CONNECTOR 3P	
CN601	*1-580-843-11	PIN, CONNECTOR (POWER)	
CN602	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN603	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
		<DIODE>	
D202	8-719-110-30	DIODE RD12ES-B1	
D203	8-719-110-13	DIODE RD9.1ES-B2	
D204	8-719-911-19	DIODE 1SS119	
D205	8-719-109-85	DIODE RD5.1ES-B2	
D206	8-719-110-30	DIODE RD12ES-B1	
D207	8-719-110-30	DIODE RD12ES-B1	
D208	8-719-110-30	DIODE RD12ES-B1	
D209	8-719-110-30	DIODE RD12ES-B1	
D210	8-719-110-30	DIODE RD12ES-B1	
D211	8-719-110-30	DIODE RD12ES-B1	
D212	8-719-110-30	DIODE RD12ES-B1	
D213	8-719-110-30	DIODE RD12ES-B1	
D214	8-719-911-19	DIODE 1SS119	
D215	8-719-400-18	DIODE MA152WK	
D601	⚠8-719-510-53	DIODE D4SB60L	
		<FUSE>	
F601	⚠1-576-230-11	FUSE (M.B.C.) 3.15A/250V	
	1-533-223-11	CLIP, FUSE; F601	
		<FILTER>	
FL201	1-424-261-11	FILTER, SIGNAL LINE NOISE	
FL202	1-424-261-11	FILTER, SIGNAL LINE NOISE	
FL203	1-424-261-11	FILTER, SIGNAL LINE NOISE	
FL204	1-424-261-11	FILTER, SIGNAL LINE NOISE	
FL205	1-424-261-11	FILTER, SIGNAL LINE NOISE	
FL206	1-424-261-11	FILTER, SIGNAL LINE NOISE	
		<IC>	
IC201	8-752-053-17	IC CXA1114P	
IC202	8-759-041-82	IC TDA1013B	
		<COIL>	
L201	1-412-533-21	INDUCTOR 47UH	
		<TRANSISTOR>	
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q203	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q204	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q205	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q206	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q207	8-729-230-46	TRANSISTOR 2SA1162-YG	
		<RESISTOR>	
JR200	1-216-296-00	METAL GLAZE 0 5% 1/8W	
R201	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R202	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R204	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R205	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R206	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R207	1-247-738-11	CARBON 82 5% 1/2W F	
R208	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R209	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R210	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R211	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R212	1-249-387-11	CARBON 3.3 5% 1/4W	
R213	1-249-417-11	CARBON 1K 5% 1/4W	
R214	1-249-438-11	CARBON 56K 5% 1/4W	
R215	1-249-404-00	CARBON 82 5% 1/4W	
R216	1-249-404-00	CARBON 82 5% 1/4W	
R218	1-249-404-00	CARBON 82 5% 1/4W	
R219	1-249-404-00	CARBON 82 5% 1/4W	
R220	1-249-403-11	CARBON 68 5% 1/4W	
R221	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R222	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R223	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R224	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R225	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R227	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R228	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R229	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R230	1-216-023-00	METAL GLAZE 82 5% 1/10W	
R231	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R232	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R233	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R234	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R235	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R236	1-249-417-11	CARBON 1K 5% 1/4W	
R237	1-249-417-11	CARBON 1K 5% 1/4W	
R238	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R239	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R240	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R241	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R242	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R244	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R245	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R246	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R247	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R249	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R250	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R251	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R252	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R253	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R254	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R601	⚠1-205-909-11	WIREWOUND 3.3 5% 10W F	
R603	1-249-443-11	CARBON 0.47 5% 1/4W F	
		<RELAY>	
RY601	⚠1-515-579-11	RELAY	
		<TRANSFORMER>	
T601	⚠1-424-391-11	TRANSFORMER, LINE FILTER	
T602	⚠1-424-391-11	TRANSFORMER, LINE FILTER	
		<THERMISTOR>	
THP601	⚠1-806-165-12	THERMISTOR (POSITIVE)	

****

The components identified by shading and mark ⚠ are cirtical for safety.
Replace only with part number specified.

PW

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*9-902-396-01	PW BOARD	
		********	
	9-902-398-01	SWITCH, TACTIL	
		**********	
		MISCELLANEOUS	
		************	
	⚠1-426-590-11	COIL, DEMAGNETIZATION	
	⚠1-451-354-11	DEFLECTION YOKE (Y11SLA)	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
	1-452-512-11	MAGNET	
	1-466-678-11	SWITCH BLOCK	
J501	⚠1-540-054-11	INLET, AC	
	1-561-530-00	CONNECTOR (DC POWER)	
SP901	1-544-187-11	SPEAKER	
V901	⚠8-735-821-05	PICTURE TUBE (A27KGC10X)	
		**********	
		ACCESSORIES AND PACKING MATERIALS	
		**********	
	PART NO.	DESCRIPTION	REMARK
	1-501-397-41	ANTENNA, TELESCOPIC (AN-18G)	
	⚠1-532-325-11	FUSE, TIME-LAG 6.3A/250V	
	⚠1-690-827-11	CORD SET, POWER	
	⚠1-690-828-11	CORD, DC POWER	
	*3-704-301-01	BAG (STANDARD), PROTECTION	
	3-754-681-11	MANUAL, INSTRUCTION	
	*4-035-665-01	CUSHION (UPPER) (ASSY)	
	*4-035-666-01	CUSHION (LOWER) (ASSY)	
	*4-035-667-01	TRAY	
	*4-035-675-01	INDIVIDUAL CARTON	
		REMOTE COMMANDER	
	1-693-075-11	REMOTE COMMANDER (RM-818)	
	9-900-029-01	COVER, BATTERY (FOR RM-818)	

English
92BE1830-1
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